

# SUPPLEMENT.

## The Mining Journal, RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[The MINING JOURNAL is Registered at the General Post Office as a Newspaper, and for Transmission Abroad.]

No. 2377.—Vol. LI.

LONDON, SATURDAY, MARCH 12, 1881.

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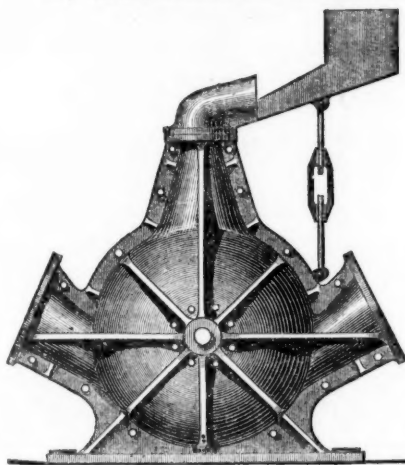


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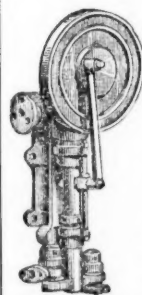
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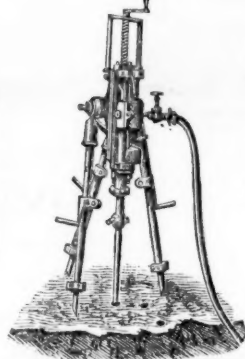
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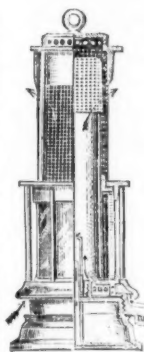
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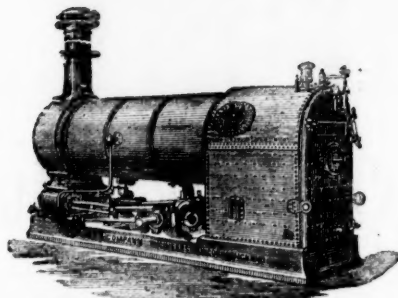
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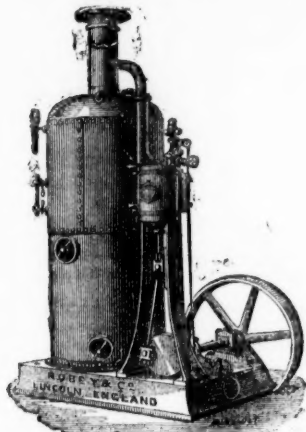
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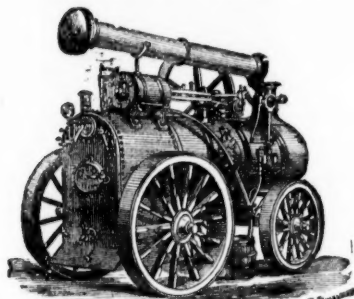
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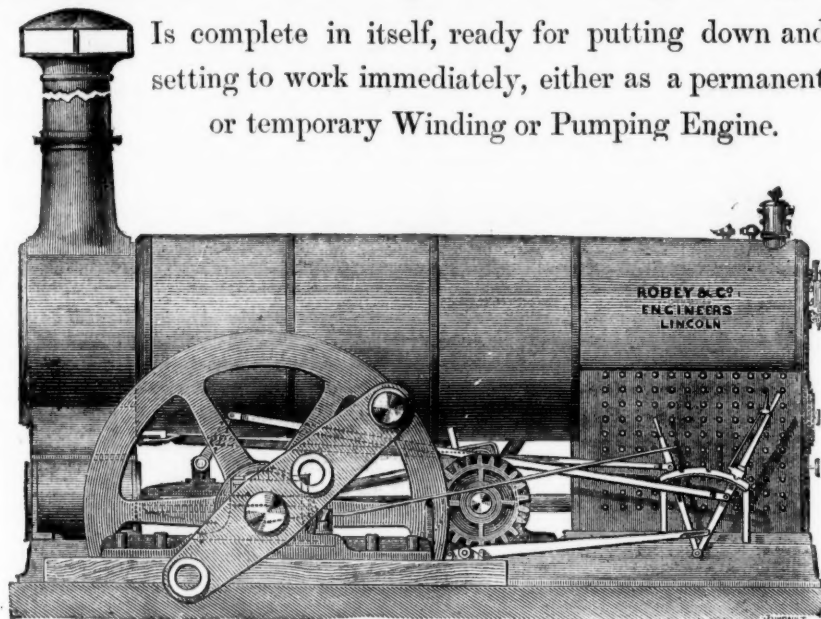
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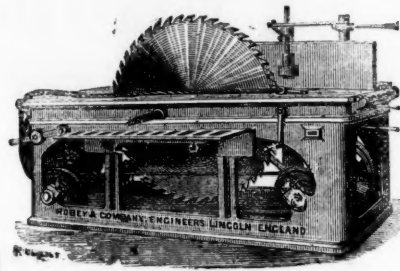


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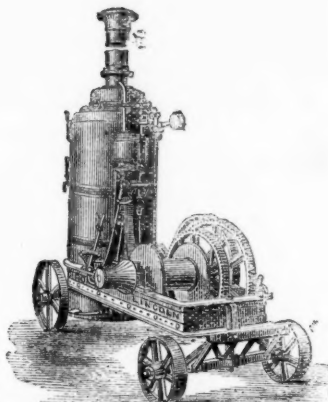
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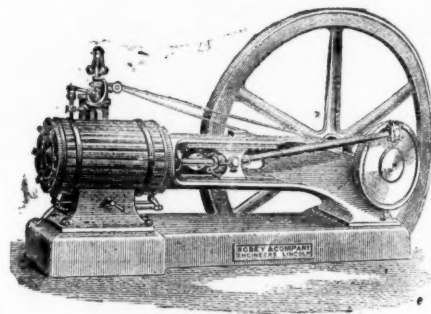
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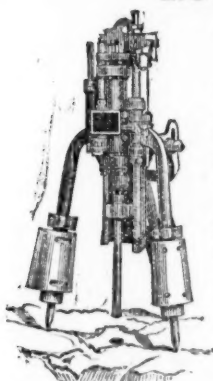
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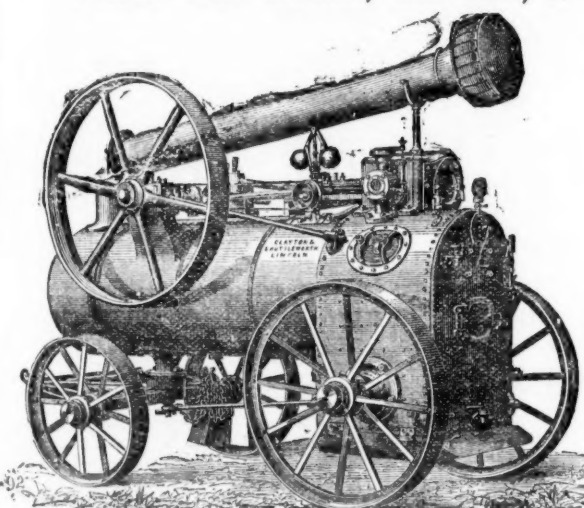
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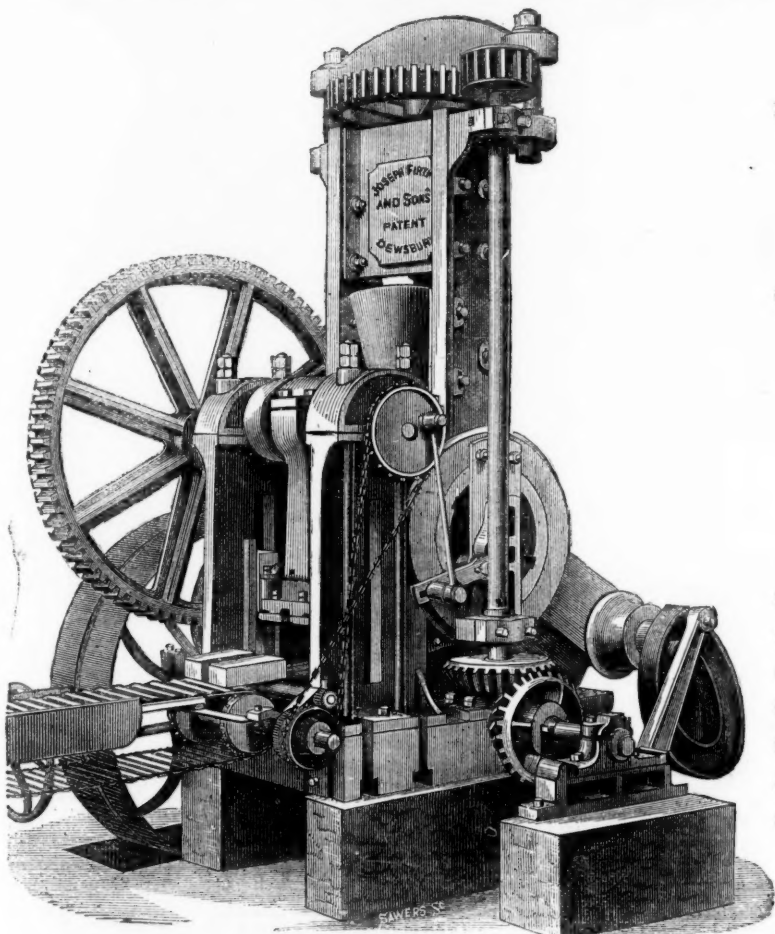
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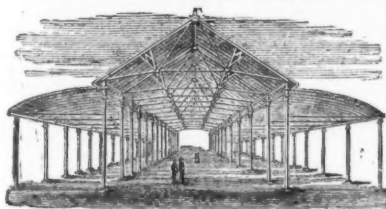
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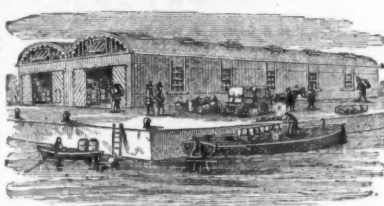
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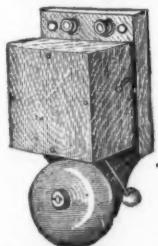


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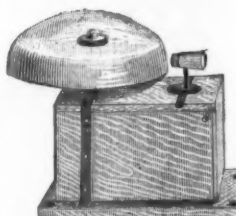
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**SILVER MEDAL** of the Highland and West of Scotland Agricultural Society, 1875—HIGHEST AWARD.

At the south end of the St. Gotthard Tunnel, where

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Are exclusively used, the advance made during eight consecutive weeks, ending February 7, was 24'00, 27'60, 24'80, 26'10, 28'30, 27'10, 28'40, 28'70 metres. Total advance of south heading during January was 121'30 metres, or 133 yards.

In a series of comparative trials made at the St. Gotthard Tunnel, the McKean Rock Drill continued to work until the pressure was reduced to one-half atmosphere (7½ lbs.), showing almost the entire motive force to be available for the blow against the rock—a result of itself indicating many advantages.

The GREAT WESTERN RAILWAY has adopted these Machines for the SEVERN TUNNEL; the LONDON AND NORTH-WESTERN RAILWAY for the FESTINIOG TUNNEL; and the BRITISH GOVERNMENT for several Public Works. A considerable number of Mining Companies are now using them. Shafts and Galleries are driven at from three to six times the speed of hand labour, according to the size and number of machines employed, and with important saving in cost. The ratio of advantage over hand labour is greatest where the rock is hardest.

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The McKEAN ROCK DRILLS are the most powerful—the most portable—the most durable—the most compact—of the best mechanical device. They contain the fewest parts—have no weak parts—act without shock upon any of the operating parts—work with a lower pressure than any other Rock Drill—may be worked at a higher pressure than any other—may be run with safety to FIFTEEN HUNDRED STROKES PER MINUTE—do not require a mechanic to work them—are the smallest, shortest, and lightest of all machines—will give the longest feed without change of tool—work with long or short stroke at pleasure of operator.

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 11, Parade, Truro, 3rd February, 1881.  
 R. SYMONS.

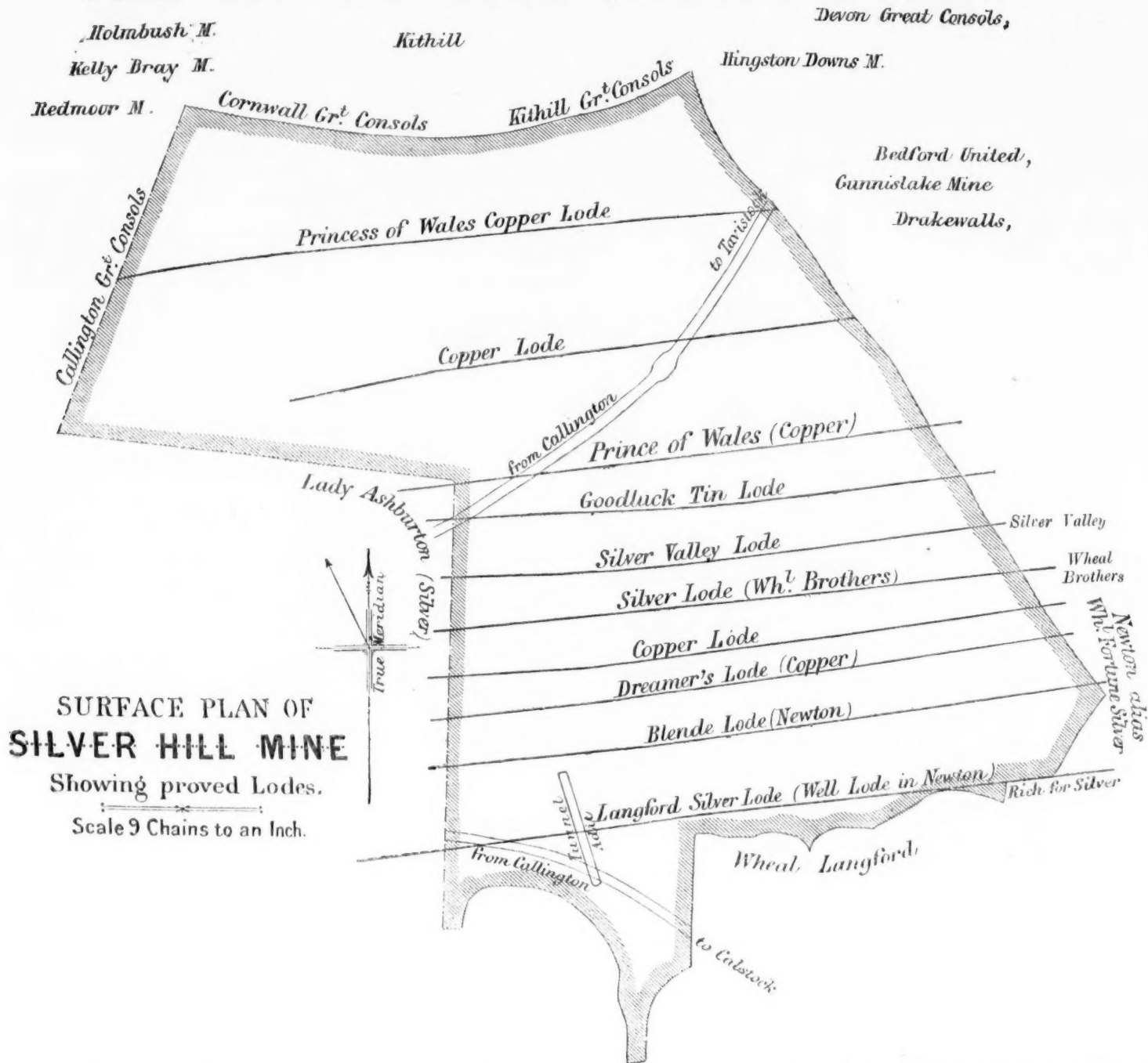
MAP OF CALLINGTON, CALSTOCK, AND TAVISTOCK MINING DISTRICTS.  
 Proposed to be published by subscription, a MAP of the ABOVE DISTRICTS, showing the names and boundaries of all existing settlements, roads, cross-roads, and every other matter which such a map should contain. Persons disposed to patronise the publication—at One Guinea per copy—will please send their names as early as possible to me.  
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 R. SYMONS, Mineral Surveyor, Truro.

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# THE SILVER HILL MINING COMPANY.



## THE SILVER HILL MINING COMPANY

On February 26 we published the prospectus of the Silver Hill Mining Company (Limited), to-day we insert the surface plan of the property, showing its position with regard to neighbouring mines and the various lodes which run through the property, together with the tunnel adit which is to intersect all these lodes. As the adit progresses north the depth from surface much increases to a very considerable extent, so much so that while the Wheel Brothers Silver Lode will be intersected at a depth from surface of about 35 or 40 fms., the Prince of Wales Copper Lode will be intersected at a depth of at least 70 fms. from surface.

The following extracts from the reports made on the mine shows the estimation in which the property is held by those best acquainted with it:—

Mr. GEORGE HENWOOD observes—Having made thorough surveys and examinations (occupying several months in 1851 and 1853) of the whole district, of which Silver Hill is the most important portion, I can speak of this property very fully from actual experience. It is my firm conviction, grounded on many close examinations and numerous assays of the produce of their lodes, that the whole district is of a highly argentiferous character, scarcely a sample tested failing to yield silver more or less. In several instances assays of the lodes of the district have given at the rate of four, five, six, seven, and eight thousand ounces to the ton of ore. I am not in the least surprised at the exceedingly rich silver formations met with in the neighbouring Wheel Newton, termed "Bonanzas" by the miners of Spain, Mexico, Peru, and California. No doubt the lodes in Silver Hill will prove equally rich. The Wheel Newton lode is one of the Silver Hill lodes, and its being in the same favourable rock formation (killas) in both mines, gives additional weight to my opinion. I know the Silver Hill Grant well. All the lodes of the silver-bearing "series" are within its limits. They are three in number, and they intersect neighbouring mines, where they have already produced large quantities of silver. This being so guarantees that as greater depth is attained they will be still more productive, and that their silver formations will yield ore in a still more profitably concentrated form than hitherto. I once more reiterate the opinion that the mines of this district deserve most particular attention, for, indeed, "had such mines been in Mexico, Peru, California, India, or any other foreign silver-producing country, their richest ore formations ("bonanzas") would have been long since revealed and brought into action." Had this been the case they would be now paying exceptionally high percentage dividends. Extending the present tunnel (theadit) will prove the Silver Hill lodes to a depth of 40 fms., independently of engine power or any machinery, in the most advantageously effective and inexpensive manner practicable, the importance of which is much too great to be left unnoticed. I do not know of another such eligible mining field in this country as Silver Hill Grant, which comprises at least three (probably more) veritable silver lodes. This is of paramount importance, the success of Silver Hill not being dependent on the results of one or two lodes. The geological situation is greatly in favour of Silver Hill, the conjunction of the granite and killas rock formations being close at hand, also its mining facilities and positional advantages are very appreciable. In conclusion, I have no hesitation in stating that it is my most

decided opinion Silver Hill will turn out a great prize; in other words, a mine of great wealth, proving worthy of the name that it bears.

CAPT. GEORGE ROWE, the manager of Wheel Crebor, states—This property is situated in the parish of Callington, Cornwall, on the southern slope of the well-known Kith Hill, and direct west from, and embracing all the rich silver lodes worked at the old Wheel Brothers, Wheel Sisters, Wheel Newton, East Cornwall, Wheel Langford, and others. In fact, this sett embraces all the known silver-bearing lodes in the Callington district, adjoining and traversed from east to west the entire length of this valuable mining property, which is nearly 600 fms. from east to west, and is generally considered by good mining authorities to be one of the best mining enterprises in existence. Judging from the general character of the lodes where laid open near the surface by shallow pits, and in places by small shafts sunk a few fathoms deep, proving the existence of six lodes, and the stratification of the rock, which is a beautiful light blue clay slate, easy for progress, with the junction of the granite range of Kith Hill on the north, there can be no doubt of its great mineral wealth. This mining property has also the advantage of two fine cross-courses, running nearly north and south, intersecting all the east and west lodes in the sett yet discovered, where there is every reason to calculate on finding remarkable results at the points of junction of so many lodes, which have been invariably the principal points of success in all the adjoining mines so extensively developed at shallow depths on the same lodes to the east. I need not enter into particulars on the subject of success in bygone days in the different mines adjoining to the east. Suffice it to say that in the time of Capt. J. Malachi, at the old Wheel Brothers, in its prosperity, was valued in having reserves of silver ores in the working to the amount of 200,000 lbs. Wheel Newton Silver has been reported very rich of late, and the Wheel Langford Silver, adjoining the Silver Hill mining property, is known to produce in the gossan of the lode near the surface over 6000 ozs. of silver to the ton of stuff.

CAPT. WILCOCKS observes—The geological formations are clay-slate and granite, which here form a junction; and it is about the line of contact of large bodies of these rocks that the richest and most extensive formations of silver have been found in Cornwall, Colorado, Nevada and Mexico. The mining grant is of considerable extent, being three-quarters of a mile from east to west on the course of the lodes, and nearly a mile from north to south. There are eight known lodes traversing the sett, and probably others not yet discovered. Three of these lodes are silver lodes, which have yielded immense profits in the adjacent mines. Near the valley a tunnel level has been driven north (at right angles to the lodes) about 75 fms. into the hill intersecting the south lode, which is from 2 to 3 ft. wide, composed of gossan, quartz, carbonate of iron, and mudstone, producing in places close to the surface or outcrop from 60 to 100 ozs. of silver per ton. This is the Wheel Langford silver lode which has proved so rich close to your eastern boundary. To the north-east are situated the Silver Valley, Wheel Brothers, Wheel Sisters, and Wheel Newton, all of which I may say have only been sunk to an average depth of 40 fms. from surface, notwithstanding the shallowness of the workings they have returned large quantities of silver ores at a great profit; and on the west you have the Lady Ashburton Silver Mine, which has lately produced rich silver ore within 4 fms. of the outcrop of one of these lodes.

CAPT. BUCKINGHAM states Silver Hill commands three-quarters of a mile on the course of ten parallel lodes from east to west, and about the same distance from north to south, in mountain or hilly ground, affording facilities and scope for opening out the lodes in the most expeditious and advantageous manner

possible to a greater depth than mining developments have ever yet reached in the locality, by means of a cross-cut tunnel adit level, which has been started from the southern boundary, and driven 75 fms. north into the hill, and by extending this tunnel to the northern boundary, which can be done quickly, as the ground is easy for exploring, you will unwater and drain the lodes to a depth of 80 fms. to 70 fms. from the surface outcrops without any machinery for pumping or hauling, as the water and mineral will gravitate through the tunnel over a well-laid run of pipes and a good constructed tramway, the importance of which cannot well be estimated in saving both time and expense to a company, in developing a mining property of such magnitude and vast mineral resources. The geological conditions are of the same character and richness as those of the silver ore-bearing formations of Mexico, Colorado, and Nevada, having the junction of the granite and clay-slate rocks within your boundary, traversed by elvan dykes and cross-courses, intersecting the lodes nearly at right angles. Three of these lodes are veritable silver-bearing ones, and where they form a junction you may be sure of finding rich deposits, carbonates or bonanzas of silver. One of these silver lodes has been cut through by the tunnel level referred to, and although only a few feet from surface out-crop, produces in places 100 ozs. of silver to the ton of ore or lodestuff. This is the Wheel Langford lode, and in the Wheel Langford sett, which adjoins your boundary, this lode has returned very large profits. Looking, therefore, at this great mining property as it stands, geologically regarded, intersected by lodes which have been proved rich both to the east and west, I cannot call it a speculation, but a safe investment for capital, as early and profitable returns are certain.

Capt. KNOTT, of Newton Mine, writes—This grant embraces nine well-known lodes, the stratum being clay-slate. It is bounded on the east by the Wheel Langford, St. Vincent, Wheel Mexico, Silver Valley, Wheel Brothers, Prince of Wales, Newton Silver Mine, and the old Harrow Barrow Mines, which have yielded from time to time large quantities of rich silver, copper, tin, zinc, and arsenical ores. Wheel Langford and St. Vincent silver lode, underlying south, underlying south, will form a junction with the last-mentioned lode at or about 60 fms. below the surface. This lode varies in width from 18 in. to 10 ft., and is composed of flookan, quartz, prlan, and carbonate of iron, interspersed with silver-lead, and rich silver ores, varying in quality from 20 to 3210 ozs. of fine silver per ton of stuff as sold by myself. I would remark the point of junction referred to above has been seen only in one place—viz., in the Newton Silver Mine—at which point a quantity of rich silver ore was discovered, and 10,000 lbs. worth was broken and sold. Silver Valley and Wheel Brothers silver lode has been worked to a depth of 50 fms. in Wheel Brothers. It underlies south, and is from 1 to 6 ft. wide, composed of flookan, quartz, prlan, and carbonate of iron, interspersed with silver-lead and rich silver ores. From this lode immense quantities of silver ore have been raised of as great a value as 650/- per ton. Comparatively speaking, little work has been done on any of the lodes in Silver Hill; but the productiveness of these lodes in the mines, both to the east and west, the strata in which they are imbedded, and their position and direction with respect to the granite formation, afford the strongest possible proof that Silver Hill requires only judicious and spirited working to prove a most profitable mine.

Want of space prevents our printing the reports in their entirety, but they are well worth perusal, and our readers should write to the Secretary of Silver Hill, 110, Cannon-street, E.C., for copies of them. We may observe that the subscription list closes on Tuesday for London, and on Wednesday for the country.

**COPPER MINING ON LAKE SUPERIOR.**—An encouraging account of the position and prospects of mining on Lake Superior is given in the Houghton Mining Gazette. The Quincy Mining Company has declared a dividend of \$5 per share, payable on Feb. 15, and the Calumet and Hecla have also declared their regular quarterly dividend of \$5 per share, or \$500,000 on its capital stock. The winze in the Huron Mine, north of No. 10 shaft, has already passed through 65 ft. to 70 ft. of rich lode, and in a few days a large block of stamp and barrel work ground will be available for stoping. No. 10 shaft is now sinking below the 4th level, and the deposit carries good stamp rock and some heavy copper. The stopes back of the second level hold as good as ever. No. 6, which is one of the main extracting shafts, is now being sunk below the 6th level. The December product of the Huron is not available yet on account of repairs in the Pewabic mill which prevented the crushing and dressing of a pile of rich rock, which still remains on the dump. During 1880 more important improvements in the direction of expedition and economy were introduced on the copper mines of Lake Superior than any previous year in their history. At the Tecumseh the shaft openings on the Calumet conglomerate and Osceola amygdaloid are progressing

satisfactorily. About 10 ft. more will have to be sunk, when regular mining on the former belt will proceed, and from which development much is expected. No. 1 shaft on the amygdaloid is an object of great interest and is fairly getting into the lode. The copper mines of Lake Superior point to facts and figures representing their solid industrial condition, output and earnings, while Maine and other would-be competitors in producing copper have only words to direct attention to.

**THE MINES OF ARIZONA AND MEXICO.**—The Hon. Alex. Del Mar, mining engineer, attached to the United States Monetary Commission, has started from San Francisco, to make a professional tour through the mining districts of Arizona and Mexico. Parties having mines to be examined in those States can secure the services of Mr. Del Mar by communicating with him, by mail or telegraph, at his office, 216, Sansome-Street, San Francisco.

**MINERAL WEALTH OF IRELAND.**—We are glad to learn there is at length a fair chance of the well-known rich resources of our western district being developed. The mines of Gortmore (lead), and of Cregg (lead and copper), and Cloosh (lead), have been this week in-

spected by one of our most eminent mineralogists, Mr. Dunker, accompanied by Mr. D. Gettings, solicitor, of Glasgow, and Mr. J. J. Coghlan C.E., of Galway, and we are glad to state, on the authority of Mr. Dunker, that other precious metals to a large extent exist in all of them, especially in the Gortmore Mine. Let us hope, however, that the reports of these gentlemen, who have made this survey on behalf of the capitalists who are willing and anxious to undertake the development of our mineral wealth, will have the effect of giving immediate and extensive employment in the districts in which those mines are situated. We have much pleasure to append a certificate which we have received from Mr. Dunker, a graduate of the German University at Bonn: "I have made a close investigation of the mineral resources of the mines at Gortmore, on the estate of Mr. Edward Guilfoyle, and of the different lodes bearing thereon, and I am satisfied they are of immense value if properly worked.—J. PETER DUNKER, Mining Director."—*Galway Indicator*.

**HOLLOWAY'S OINTMENT AND PILLS** combine both sanative and sanative powers in a high degree—by the former term is understood their ability to preserve health, by the latter their capability to restore health. With these remedies at hand no invalid need be at fault to guide himself or herself through the many trials to which everyone is subjected during our long and oft-times inclement winter. Coughs, colds, ulcerated throats, whooping cough, can be successfully treated by rubbing this ointment upon the chest, and by taking the pills during damp, foggy weather, asthmatic sufferers will experience the utmost possible relief from the inunction of the ointment, and all tender-chested persons will save endless misery by adopting this treatment.



Original Correspondence.

MINERAL WEALTH OF SOUTH AUSTRALIA.

SIR,—It is some time since I have troubled you with a communication, as there has not been very much to report in the way of mining news. About eight or nine months ago I sent you a printed account [published in *Mining Journal* of May 29] which had been furnished by me to the Advertiser, of the Bellara Mine, 12 miles east of the city (Adelaide) in the hills. Since then further investigations have proved the existence of a number of lodes of copper on the property. The ore is of excellent quality, carbonates and sulphides, which are readily dressed up to 30 per cent. of fine copper. Gold also exists alongside the copper in the walls of some of the lodes. The distribution of the precious metal throughout the colony is continually being proved to be much more extensive than we have hitherto supposed. But our capitalists and speculators have been so often taken in with supposed gold mines that when the genuine thing is offered to them they will not notice it. It is a matter for regret, as, if properly followed out, I believe our production of gold might soon be made to equal in value that of copper in its palmy days. It has long been known that a considerable amount of gold existed along with the copper in the Burra Mine. Recently something fresh has turned up, which induced the directors to hold a special board meeting to consider what steps they should take in connection with the matter. A surprisingly rich discovery of gold has been made in another locality, which is not yet publicly known. I have a beautiful piece of gem opal in my possession, which was found about 300 miles north of Adelaide. I send you a sample of asbestos found within 70 miles of Adelaide, and shall feel obliged if you will let me know the value of it per ton in England. We are not yet acquainted with half the mineral wealth we possess in South Australia.—*Adelaide, Jan. 8.* J. B. AUSTIN.

BRITISH MINING ENTERPRISE IN BRAZIL.  
APPEAL RE CATA BRANCA BLACKS—SLAVERY.

SIR,—The Tribunal de Relacao or Court of Appeal of Minas Geraes has heard the appeal of the St. John del Rey Company against the sentence of the Guiz de Direito of Sabara, giving liberty to these ill-used Blacks. The Tribunal confirms the sentence of liberty, and dates it from Jan. 1, 1860—thus declaring that these Blacks have been kept in illegal slavery at the mines at Morro Velho till the year 1877, at which time they had a guardian appointed, and were in the custody of the law, though still left at Morro Velho, and subjected to the same treatment as before as slaves.

By some unaccountable confusion of ideas only to be understood by the Brazilian legal mind it was decided they were not entitled to the wages they had earned, although earned during the period they were pronounced to be free, the St. John del Rey Company pleading that these wages had been paid away (but without the authority of the Cata Brancas) to other people with the utmost punctuality. The company does not say to whom these payments were made to the deprivation of the Blacks of their due: but it must have been very convenient to some parties whose names must appear in the proceedings to be instituted against the company in the English Courts of Law for the Blacks to obtain that justice of which they are deprived by the Tribunals of the Empire of which they are citizens. It is lamentable that an English company could be found to appeal against the sentence of liberty accorded to any Black, and reflects anything but credit upon the managers, more especially when these people have been so deeply, knowingly, and willfully injured at their hands—for the benefit of whom? Let the directors answer.

Mr. Tendon, when first in Brazil at the time of the dismissal of Mr. Gordon so suddenly, was fully and intimately conversant with all the lamentable details of this cruel case; but not a word has ever been heard at the general meetings, although the company was laid under such a serious, moral, and pecuniary liability. During the case there was some talk about powers of attorney from the directors of the long-defunct Brazilian Company, but they were not produced in Court or filed with the papers in the cause. C. W. W.

*Ouro Preto, Feb. 3.*

MINING IN COLORADO—ALMA DISTRICT—No. XII.

SIR,—The Alma carbonate ridge still attracts attention, but the very severe weather prevents any external operations. The snow is very deep, and only those who got up their buildings in the fall of the year and commenced driving or sinking are doing anything of any value. There is great difficulty in getting supplies up the mountains, especially firewood. Many of the little miners pack their provisions on their backs, travelling on snow shoes; this is pretty hard work, nevertheless hundreds are doing it. I think there must be at least 70 mine locations now on this ridge; on each a shaft, pit, or open cut has to be made 10 ft. deep to comply with the law; if not done the prospectors cannot hold the claims. The most prominent mine as thus far developed is called the Scandia; the shaft is down about 45 ft. deep, sunk through a bed of argillaceous carbonate of lime; it carried a little silver at surface, and now at the bottom a little lead is coming in, and with it the silver is increasing. The best samples in bulk I have received assays 40 ozs.; it is a solid carbonate of lead; specimens can be obtained that will run 100 ozs. The ore is scattered for 6 ft. through the gangue; as yet there is no solid body, there being no walls of a definite shape it cannot be defined as a lode. The strata incline at an angle of from 50° to 70°, and as each is passed through the rock becomes more mineralised, indicating there is a good deposit somewhere below. This mine is opposite the town of Alma, about ½ mile distant, and located in the heavy pine groves that cover the ridge, and about 500 ft. above the valley of the Platte; easy grade wagon roads are made nearly up to the mines; the ground being soft shafts can be sunk cheaply—say, from \$12 per foot, including timbering. There is no water only such as leaks down the crevices from the melting snow, which is not much. This property was purchased last summer by the celebrated Denver physician, Dr. John Elsner and two others; he has now bought all the other partners out, and become sole owner. A company is in course of formation, and when the snow goes away active operations will be commenced. The shaft was in course of deeper sinking in the autumn, continued until the snows set in, which were unusually early, being in the middle of November. No one can predict with any degree of certainty what may be the eventual result of these operations any more than the Leadville miners could three years ago, who commenced their mines in a very similar geological formation; their success led to the foundation of a large city, now containing 25,000 inhabitants, and running 12 smelting works. What occurred there may be reproduced here; it is all a speculation. This carbonate ridge is a spur of Silver Heels Mountain, having an altitude of 13,000 feet above sea level, or 3000 ft. above the valley; it is 5 miles in length and about ½ mile wide. The mining claims are 1500 ft. long by 300 ft. wide, an area of 10 33-100 acres each. All titles are perfect where the mining law is strictly observed.

Capitalists and investors desirous of embarking in this new mining field can have claims located, the shaft sunk deep enough to comply with the law, and every preliminary expense disbursed for about \$200 (40%). These figures only represent what claims may be obtained for at the time of my present writing. Next summer they will probably be three or four times as much. Now, should no very heavy deposits of ore should be found on most of them, no great loss is incurred; the timber alone on many of them is worth more than the cost of the claim. Patents can be obtained which render the land freehold; the cost of a patent is about \$225. No taxes are charged until the mines are in full operation, and then the assessment is only on the buildings and machinery.

Last year I located 22 claims for the Alma Mining Association. The chief mine of this group is called the Diamond; it is about one mile from the Scandia, and has a shaft down 35 ft.; the ore increases in value with depth. Above this, around the foot of Silver Heels Mountain, many claims have been located. A shaft in one of them, 25 ft. deep, intersected a course of silver-lead ore 12 in. thick; it assays 40 per cent. in lead and 100 ozs. in silver. There does not appear to be any copper in these deposits, which to me appears to be

somewhat strange, as the formation is the lower secondary Devonian in its sedimentary form. If the ore would contain a little more magnate, baryta, and zinc-blende, there would be an increase of silver; this is a common characteristic of all the best deposits. If any one of the shafts should strike a big body of ore the ridge would be worth millions.

The railway from Denver is now up to within 11 miles of Alma, and is supposed to be completed this summer. Smelting and other reduction works are very much needed. All the ores are sent away to Denver, St. Louis, or Omaha at a heavy cost for transportation; they could be reduced here for about half what the smelters charge outside of the county. I have not yet made a detailed geological report of this new district, but hope to do so this summer. There will be at least 200 men engaged here as soon as the hills are clear of snow. Although I invest in these mines to the extent of my means, I do not advise capitalists to do so unless they have had some competent person to report on the nature and prospects of the properties. Like Leadville, it is all a speculation, and will turn out to be a big fortune or nothing. Such is my view of the Alma carbonate ridge mines.—*Alma, Feb. 18.* CHARLES S. RICHARDSON, C.M.E.

THE EMMA RE-CONSTRUCTION.

SIR,—Can any of your readers inform me what has become of the Emma Mine re-construction scheme? At the last meeting the shareholders were told that negotiations were proceeding as quickly as possible, and I understood the new company was to be brought out forthwith. Mr. Macdonald gave us to understand that he would publish from time to time any information he might receive with regard to the condition of the mine. Since then, with the exception of a paragraph announcing the discovery of a large quantity of water, and the information that all indications looked favorable, I have heard nothing of the matter. As it is at present, I cannot transfer my shares, and am, therefore, compelled to keep my money locked up. How long is this most unsatisfactory state of affairs going to last? May I ask who is accountable for the delay? *Warford Court, March 9.* A SHAREHOLDER.

THE CEDAR CREEK GOLD MINES.

SIR,—I should like to know how the arrangements for the re-working of these Californian mines are progressing. Last autumn there was a proposal under consideration for re-constructing the Cedar Creek Company, and, by raising a few thousand pounds of fresh capital, proceed with the development of the mines. The shares in the Cedar Creek Company are now at a very low price, and if the scheme of re-construction can be carried out we shall soon see them worth 10 or 30s. The Cedar Creek Mines have this advantage over a great many other mining properties, that they have been largely opened up, and just as fortune was beginning to smile on the property it was found that the money was all spent.

As there is now a disposition to embark capital once more in American mines—as, for instance, the revival of the Emma, Flagstaff, Last Chance, and other companies—I hope to see something done with Cedar Creek ere long. A SHAREHOLDER.

EUREKA (NEVADA) MINING DISTRICT.

SIR,—I have the pleasure to communicate to you a few items of news relating to this important mining centre, which will, no doubt, prove interesting and instructive to the readers of your widely disseminated periodical:—

Although the record of Eureka district as a bullion producer is unequalled by any on the Pacific Coast, excepting the Comstock, notwithstanding the fact that it possesses two mines that alone have paid more in dividends than all the dividend-paying mines combined, it is comparatively unknown to the investment public outside of a few capitalists, who have reaped rich returns from their ventures.

THE BALANCE-SHEET.—Of the amount invested in the district by foreign capitalists about \$800,000 has come from England and about \$400,000 from the Pacific Coast and other points in the United States, making in all \$1,200,000. Since the opening of the district—ten years ago—\$1,744,500 in assessments has been levied on mines listed on the San Francisco Stock Boards, and \$7,371,000 paid in dividends, showing excess of dividends over assessments of \$5,626,500. AS COMPARED WITH COLORADO.—Two mines of the Eureka district have during their short existence paid more in dividends than all the mines of Colorado now quoted, as will be seen from the annexed table:—

DIVIDEND PAYING MINES OF COLORADO.	
Amie .....	\$ 305,000
American Consolidated .....	90,000
Breece Iron .....	20,000
Crysolite .....	1,100,000
Climax .....	130,000
Catapult .....	60,000
Dunkin .....	105,212
Evening Star .....	125,000
Hibernia .....	100,000
Morning Star .....	240,000
Little Chief .....	700,000
La Plata Mining & Smelting .....	250,000
Total .....	\$6,797,373
Eureka Consolidated .....	\$4,465,000
Richmond .....	2,332,000
Total .....	\$7,351,000
Total Colorado .....	6,797,373
Excess in favour of Eureka's two mines .....	\$ 523,627
AS COMPARED WITH UTAH MINES.	
Barber and Walker .....	\$ 70,000
Horn .....	200,000
Lead .....	87,000
Ontario .....	\$100,000
Stormont .....	135,000
Total .....	\$3,592,000
Dividends Eureka's two mines .....	7,321,000
Excess Eureka's two mines .....	\$3,729,000
AS COMPARED WITH ARIZONA MINES.	
McMillan .....	\$ 90,000
Silver Ring .....	550,000
Tombstone .....	450,000
Western .....	525,000
Total .....	\$1,615,000
Dividends Eureka's two mines .....	7,321,000
Excess Eureka's two mines .....	\$5,706,000
AS COMPARED WITH DAKOTA MINES.	
Deadwood Terra .....	\$ 100,000
Father de Smet .....	210,000
Great Eastern .....	15,000
Homestake .....	870,000
Total .....	\$1,195,000
Dividends Eureka's two mines .....	7,321,000
Excess Eureka's two mines .....	\$6,126,000

This shows that the Eureka Consolidated and Richmond have paid \$919,000 more in dividends than all the mines of Utah, Arizona, and Dakota combined. The yield of Ruby Hill alone, since the discovery of ore ten years ago, is over \$50,000,000. This has been taken from ground 6000 ft. long by 1200 ft. wide, and at no greater depth than 1200 ft.

SOMETHING TO CONSIDER.—In 1871 the stock of the Eureka Consolidated Mining Company sold for \$7-25 per share, and a great deal changed hands at less figures. Every man, however, who invested at that price has had a return of \$51 profit on every share of stock held, and yet the mine is scarcely more than in its infancy, and has since the period named been burdened with costly litigation.

In 1871 the Richmond Mine was sold in London for \$1,000,000, and has already returned \$2,856,600 in profits. A depth of only 900 ft. has been attained, and from the second to the seventh level is now a solid mass of ore.

The ore in the late strike of the Albion Mine is reported to be exceedingly rich, and will average \$100 to \$150 per ton. It is the richest body of ore ever found on Ruby Hill.

Messrs. William Stinson and Co., who are working the Phoenix on a six months' lease, made a shipment of 30 tons of good ore yesterday. They are sanguine that the lease will prove a lucky venture, and the indications thus far warrant the belief.

THE MARYLAND TUNNEL.—Work on the tunnel has been temporarily suspended the management believing it good policy to await developments in some of the adjoining property. In the meantime they are prospecting some of their numerous claims.

The Prospect Mountain Tunnel Company have completed their tunnel work a distance of 1500 ft., and the prospects for striking ore looking very favourable.

THE BULLWACKER.—An average of 5 tons of ore are shipped from this mine to the reduction works daily. The amount would be larger but for the fact that 200 ft. of the incline filled by the chlorides is being cleaned out.

EL DORADO.—Mr. Donald and Co. are prospecting work on the above named mine with good success, and are taking out ore assaying as high as \$200 per ton. It is possible that the series of mines belonging to the gentlemen interested in this claim will change hands shortly.

THE HAMBURG MINE.—No work will be done on the Hamburg before April 1, when superintendent Powell anticipates that operations will be resumed. The Hamburg is conceded to be an excellent property, and it should be thoroughly developed.

A REDUCTION.—Ten contracts have been closed in the Richmond Mine, throwing

60 men temporarily out of employment. This course was necessary on account of the large amount of ore on hand, the furnaces being unable to consume the supply.

The Boston Economist says Nevada is not dead but sleepeth. With silver in unknown quantities yet to be produced, her copper resources will soon astonish the average miner.

The general aspect of our mining business throughout the district never looked so prosperous and generally encouraging as at present. We do not expect a "boom," but we do look for very prosperous times here this spring and summer.

*London, March 2.*

RUBY HILL.

THE EUREKA (NEVADA) MINING DISTRICT.

SIR,—I have the pleasure to communicate a few remarks on current events in this locality, which no doubt will prove interesting to your numerous readers:—

The Eureka Tunnel Mine, situated upon the eastern slope of Prospect Mountain—half an hour's drive from Eureka—at the head of Goodwin Canyon, and directly east of the famous Dunderberg Mine, has recently been attracting considerable attention from our mining men. Last Tuesday, through the courtesy of secretary E. J. Butler, a News reporter explored the tunnel and the numerous drifts and cross-cuts of this property. The tunnel crosses five known ledges, upon which are a number of producing mines, among which are the Bald Eagle, Industry, Lemon, Plute, Magnet, and the El Dorado. Some of these mines have produced the richest ore ever found in the district. The Eureka Tunnel Company's mines, purchased by them are four in number, the Isaac, the Crucible, the Indus, and the Exchequer, which adjoin some of the mines previously named, and cross at right angles with the line of the tunnel. At the mouth of the tunnel everything is conveniently arranged. Near the entrance is a large fire-proof machine shop, and to the west is ample dumping room. The header of the tunnel is now in 1610 ft., which length has been attained without the timbering of one foot of ground, the formation proceeded through being well adapted to running the large tunnel, which is 5 ft. by 7 ft. The header has just passed through a 300 ft. body of shale, and its face now exposes mineralised quartz and streaks of low grade ore. This is at a depth from surface of 1000 ft. At a distance of 900 ft. from the mouth of the tunnel a drift has been run north 60 ft., and an upraise made to the east, which carried a rich vein of ore its entire length. The bottom of this north drift, toward the end, also shows ore of a good quality. About 1300 ft. from the mouth of the tunnel a 12 in. chloride vein was cut through, which assayed up into the hundreds, and which lies horizontally in line. A little further on was encountered a 5 ft. lead and carbonate vein, which looks well. From the mouth of this tunnel the company has struck no less than 25 prospects that would be followed up were the mine located on Ruby Hill, but not being provided with a compressor, which would facilitate drifting and cross-cutting, the company has directed its whole energy toward pushing the header forward into the bowels of the mountain. At an early day a compressor will be erected, when prospecting will be vigorously prosecuted. At two points in the tunnel ore has been stowed away in sacks. The shale and lime formation through which the tunnel has passed is a mystery to all geologists, its peculiar twistings and different pitchings puzzling the most proficient, but all agree that this property will surely develop into a valuable mine.

A. Jenkins and Donald Fraser are prospecting in the El Dorado Mine under and near the old Cadden ore body, and expect soon to strike a continuation of that deposit. Two years ago Mr. Cadden and his partner took out of that locality \$12,000 per month. Messrs. Jenkins and Fraser have leased this mine from the Cadden Company, and propose to take it out at that rate.

At the Silver Corner, sinking of the shaft has been resumed, which is now down about 280 feet in a favourable formation. Until good weather sets in ore will not be shipped from this mine.

There are rumours on all sides of a big strike in the Noonday. The stock has doubled in value during the last three days. The body of ore is said to exceed in richness anything that has ever been penetrated in the Bodie district.

Charles Arrivey, a brother of Tom Arrivey, of the Richmond, arrived in Eureka a few days since from Grant district. It is located 70 miles south-east of Eureka, and from Mr. Arrivey's representations, it will ultimately prove a big camp. In company with Mr. Alex. Beatty, he is working a number of mines that have developed free milling and sucking ore, assaying from \$700 to \$1500.

The machinery for the Albion is on the ground, and its erection will be commenced next Monday morning. Ladders have been placed in the shaft to enable the miners to work on the 400 while the surface improvements are being completed.

Albion stock caused another flurry in our local stock market yesterday by a jump of 20c. from Saturday's quotations, when it closed at 80c. Yesterday 1500 shares were sold in the San Francisco Board at 95c. and 81, and it had the effect of stirring up a local sharp. It has been frequently predicted of late that the mine would be the point of important developments, and should this prove true it cannot help but prove advantageous to Eureka district.

The Richmond Company ship this morning, by Wells, Fargo, and Co.'s Express, 11 bars of bullion, valued at \$26,034-94.

We were informed last evening that an important strike had been made in the Ruby-Dunderberg Company's mine, the Bullwacker, and that a large body of galena ore had been discovered.

In the Banner Mine they have an extensive body of high grade ore on the 210; in fact, the mine is looking well in a number of places. Fifty tons have just been extracted and sent to the Richmond Works, and the company expects to make regular shipments hereafter.

In the Delaware No. 2 Mine, in the incline, they have from 1 ft. to 3 ft. of ore for a depth of 34 ft. The ore is of good grade.

Last week over 150 tons of ore were smelted at the reduction works of the Ruby-Dunderberg, and the furnace was kept running the entire week. There is no diminution in the ore output of the company's mines, a fact that will give satisfaction to those interested in the success of our camp.

The old slag dump at the K. K. furnace, in South Eureka, has been purchased by Mr. Cy. Horn, who is sorting it over for flux at the Atlas. The sorting is done to the west of it, and the run of the Atlas furnace shows that the old K. K. did not do its work very well. EUREKA.

CANADIAN MINING NOTES AND RAILWAY NEWS.

THE CANADA PACIFIC RAILWAY.

SIR,—At last the fight is over. The Grits, headed by the Hon. Edward Blake, attempted obstruction, and did all they could to put a stop to the enterprise, but they have been about as successful as Mr. Parnell in England. The fact of it was that Mr. Blake as a political general is no more to be compared with Sir John A. Macdonald than a Peruvian general is to be compared with the Duke of Wellington. His tactics were so absurd, his attempts to get up an excitement so futile, and his amendments so numerous, that the results of his efforts have been to make his party the laughing stock of the country. The Bill is now law, the contract and Act founded on the contract has passed the House of Commons, the Senate, and been ratified by His Excellency the Governor-General, and to-day the syndicate have a contract to build the Pacific Railway in ten years, and to receive for their pay 25,000,000 acres of land and \$25,000,000. After they get through building the railroad they are to hold the railway, and run it and make what they can out of it. The Government were particular in this matter, as the cost of running the Inter-Colonial Railway by the Government is a yearly burden on the people.

Now Canada and the Canadian Pacific Railway Company are in a fair way to make things lively in this country. The Americans would call it a "big boom," and certainly when you look at the extent of the work and the time wherein it has to be performed, no time is to be lost. If the Syndicate fulfil the contract there will be a boom—a boom in all activity—a boom in iron, a boom in steel rails, and railway material, and a general boom. The wilderness will be opened, vast stores of undeveloped wealth will be discovered, gold and silver, copper and lead iron, and its many compounds can be found here, and will be developed. The woods and forests will ring again with the strokes of the axe and the shouts of the lumbermen, and the whole country will brighten up and bless the day in which the Grits were defeated, and Sir John McDonald, Sir Charles Tupper, and Sir Leonard Tilley were called to the helm of state.

To such a Journal as this the opening up of a country as large as the whole of Europe, abounding in fertile plains, mineral wealth, and lumber, in which a railway is to be constructed which will cost \$100,000,000, must be particularly interesting, and the readers of the *Mining Journal* will, no doubt, pardon a few statistics, dry, perhaps, in themselves, but necessary, in order that they may fully understand the position.

I enclose the contract for the information of those interested. The whole line is about 2700 miles, taking in the piece of work from Lake Superior to Selkirk, and from Zale to Hanlooper.

*Brockville, Ontario, Canada, Feb. 22.* BOURNONITE.

GREAT NORTH SHEPHERDS MINE, NEWLYN EAST.

SIR,—The once celebrated East Wheel Rose district is evidently returning to its celebrity, and, judging from all I can learn from reliable sources, one will ere long be able to witness a group of rich mines there which will not only be a blessing to the neighbourhood and the county, but enrich those who may invest. There are instances where mines are set to work which neither benefit employer or employed, but that will not be said of the district of which I now write. Amongst the mines now being started my attention has been called to Great North Shepherds, and taking the position of the ground, being surrounded as it is on three sides by East Wheel Rose, Old Shepherds, and Duchy Peru one can have but little doubt that this mine will rank high, and be a favourite. Not only is the position good, which in itself would be the strongest recommendation; but I observe that in opening upon one of the promising lodes at a depth of only about 15 ft. it presents unquestionable—indeed splend—appearance for lead and blende, and this only about 100 fms. from the exceedingly rich course of blende in Duchy Peru, which is now producing, I am told, about 200 tons a week. Besides, this sett



has in it, and for at least half a mile in length, and in virgin ground, the Perran iron lode, the value and productiveness of which are well known—so that from this alone immense returns may be made. I venture to predict for this mine and the shareholders a safe, bright, and permanent future. It does seem such a pity that litigation should have been so long the cause of the district slumbering. Happily, however, the questions are settled, and life and activity are visible once more.—*March 5.* A MINERAL SURVEYOR.

#### POLGOOTH AND HEWAS MINING DISTRICT.

SIR,—In a recent letter, under the heading of "St. Austell and St. Blazey Mining District," I referred to Great Polgooth as a mine which had been pre-eminent in productiveness, and as regarded the profits derived therefrom. I am pleased to find that a gentleman of high standing has purchased the sett, and is about to form a company for its further development. The mine, which has yielded about 750,000*l.* profit to several companies, is only 120 fms. under adit; whilst Dolcoath is considerably more than 300 fms. under adit, and is richer at the bottom than ever it has at higher levels. By parity of reasoning we may expect Polgooth to increase in value as depth is acquired. This sett is several hundred of acres in extent, and contains numerous lodes never explored in any degree. Here is a vast field for mining operations, sufficient to last a century or two, and for affording employment for hundreds of labourers.

I mean in this letter to speak more particularly of another mine of great magnitude in the same district, about a mile from Polgooth. I mean Great Hewas, situated in the parishes of St. Ewe and St. Mewan, in the lands of the Earl of Mount Edgcumbe and Mr. Hawkins; extending over and under 300 acres. The workings are between the village of Sticker and the hamlet of Hewas Water. The sett is about 1 mile in length on the course of the lodes, which have an easterly strike. The rock is clay-slate, about 1 mile from the granite—the St. Stephen's boss. The mine is drained by two adits, one of which discharges its water about 200 fms. south of Hewas Water, which adit is 20 fms. deep at the engine-shaft; and the other adit discharges its water into the Sticker valley, about 50 fms. south of the turnpike-road in Sticker village, and which is 18 fms. deep at the same engine-shaft. The western adit was driven about 250 years ago, and the eastern adit was probably cut about the same period. The origin of mining in this district was at a very remote date, like that of most of the ancient tin works in Cornwall, evidences being left in the numerous open excavations and the old burrows, which abound in all directions. This mine was worked by Messrs. Malacky, Lyle, and Co., from 1813 to 1822, with a profit of about 200,000*l.* Like Great Wheal Vor they smelted their own tin, and were a smelting as well as a mining company; and as such were purchasers of tin ore, like the tin companies of the present day. They were noted for their extravagance in the expenditure of money, a history of which would excite astonishment.

In the year 1841 the late Capt. T. Carthew, of St. Just, formed a company and worked it about three years, and then stopped because the capital required for a proper development could not be raised, Carthew holding a larger share than he could maintain. It was very slightly worked, but they returned 10 tons of tin ore per month, the water being up to the 60 level all the time, the most valuable portion of the lode being below. All the tin sold from Hewas was raised from one lode (except what was raised from a caunter) averaging about 4 ft. in width all the length of the sett; its underlie northwards is 3 ft. in a fathom. There are at the north of this lode four others lodes, and an elvan course in the middle of them. These four lodes are entirely unwrought, being in virgin ground. The yield of tin ore in Malacky's time was 100 tons per month. The lode is unwrought from Charles's (the most easterly) shaft to the eastern extent of the sett—about 200 fathoms. There are two cross-roads, one near the eastern end and the other the western end of the sett. There is a caunter lode running from St. Austell Consols through this sett, which lode in that mine yielded nickel, in Hewas tin, in South Hewas grey copper ore, which fetched 36*l.* per ton, and in Pengelly it yielded copper and nickel, which nickel was sold for 300*l.* per ton. Pengelly is now under grant.

Great Hewas is situated in one of the best tin districts in Cornwall, having Polgooth at the south-east, a mile distant, St. Austell Consols at the north-west, half a mile distant, and Strawberry Mine in the same direction, where six men earned 1200*l.* in five weeks at 10*s.* in 17 tribute on tin. Great Dowgas, west of and adjoining Strawberry Mine, yielded 10 tons of tin ore per month, and about 200 tons of copper ore per month. Lyle sold the mine for 11,000*l.* The Orchard Mine, west of Great Dowgas, returned for five or six years 15 tons of tin ore per month. Strawberry Mine and Orchard are included in St. Austell Consols.

The surface of Great Hewas is well adapted for dressing appliances, having slopes eastward and westward from the principal shafts. The former companies used the western slope. The water to be pumped from the mine will serve as a motive power for winding the tinstuff, &c., thus saving some considerable cost in that department. The shafts in the mine are the following:—

Name of shaft.	Depth of adit.	Depth under adit.	Perpendicular to Level.
Stanley's	8	80	30
Pool's	10	80	30
Warne's	12	76	30
Count-house	14	40	20
Engine	20	120	120
Footway	20	60	60
Corner	20	120	35
East	20	76	35
Northerly's	20	80	80
Charles's	18	56	10

No mine in Cornwall presents better prospects of success than Great Hewas, and I would suggest the following procedure for its further development:—1. The erection of an 80-inch pumping-engine, which will drain the mine 200 fms. deep, pumping all the water to surface.—2. The erection of a 36-inch stamping engine to lift 100 stamp heads.—3. The erection of a water-wheel for drawing the tin and debris; with all the usual appliances for dressing.

There is on the surface a vast heap of "leavings," which will well pay for treatment, and can be dressed by the water pumped up by the engine. The Cornwall Railway is about 1 mile north of the sett, thus affording good transit of supplies and produce. No one who knows this property would hesitate to pronounce it one of the best mines in Cornwall, or more free from the speculative element. Of all the buildings which formerly stood on the mine—erected by the adventurers—the account-house alone stands, which, with some repairs, will serve the new company. There was a mansion built by Lyle's Company which was sold by the lord, and demolished for the sale of its materials. All the agents at the mine in those days lived in great splendour—money being abundant and freely used. The new company (to be formed) will, doubtless, act more discreetly. Indeed all mining companies of the present day, at least in Cornwall, economise their incomes by avoiding extravagance in every direction.

South Polgooth is likely to become a good mine; in fact it is so for the depth attained, which is only about 10 or 15 fms. from surface. The returns are already, I believe, 4 or 5 tons of tin ore per month, which will probably meet the cost. I find that Terras, in St. Stephen's, is taken up for another trial by Messrs. James and Co., of Grampound-road. A large elvan course containing tin ore was operated upon there about 10 years ago, under the management of Capt. M. Rickard. There are lodes also. It is said that with tin at the present price it will pay. I am not in a position to certify that it will or will not pay. A trial will show.

Tin Hill and Stannagwyn, in St. Stephens, are highly spoken of, and they are both in active operation or preparation. There are several other mines in the district, of which I intend to write another day.

I find that I understated the profits in some of the mines in the St. Austell district. East Crinnis gave a profit of 190,000*l.*; Old Pembroke, 130,000*l.*; New Pembroke, 70,000*l.*; and Charlestown United, 150,000*l.* The returns from Great Crinnis in seven years amounted to 1,000,000*l.* Mr. Joshua Rowe, a London gentleman, was the worker, and yet, owing to litigation, he died a poor man. Fowey Consols was worked 50 years, returns 1,000,000*l.*, half of which is said to

have been divided as profit. West Fowey Consols profited 70,000*l.* These figures are derived from Capt. C. Bawden, of or near Sticker, St. Austell.—*Truro, March 10.* R. SYMONS.

#### THE LEAD TRADE.

SIR,—Our market for soft pig-lead is extremely flat, and at the moment it is nearly unsaleable. Spanish silver-lead is rather scarce, yet the sales this week have resulted in a fall:—100 tons 40 o*z.* silver at 14*l.* 17*s.* 6*d.*; 150 tons silver at 14*l.* 17*s.* 6*d.*; 300 tons rich at 15*l.*; 300 tons rich at 15*l.*

LEAD ORE.—There was a sale of a lot of Alston ore at the end of last month, and the following was the result of the tenders:—100 bings at 3*l.* 10*s.* 6*d.*; 100 bings at 3*l.* 10*s.*; 100 bings at 3*l.* 10*s.* 6*d.*; and 80 bings at 3*l.* 7*s.*—*Newcastle-on-Tyne, March 9.* STOCKS.

#### ARSENIC, AND ITS FUTURE PROSPECTS.

SIR,—Perhaps some of the numerous readers of the Journal would be so good as to give a little information about arsenic, or say where it may be obtained. Do we import any from abroad? I see by Hunt's Statistics that in 1879 Devon Great Consols accounts for about three-fifths of the entire British production. The promoters of Devon Friendship claim that this mine will soon be able to rival the Devon Consols, if not to outstrip it. Taking it for granted that this statement is correct, can such a quantity be thrown on the market without seriously reducing the price of the metal? This seems to me an important question for the shareholders of both companies.—*Portsmouth, Ireland, March 8.* A. T. CARSON, M.D.

#### THE WEST MOSTYN COAL AND IRON COMPANY (LIMITED).

SIR,—In last week's Journal there is a letter on this subject signed R. George Smith. Not having been in any way connected with the company until after it had been in existence six months, I am not a promoter, as that gentleman would wish people to infer, though he himself well knows to the contrary. What Mr. Smith means by saying he "was nearly ruined" does not appear. But the report of an investigating committee, dated Feb. 12, 1875, and adopted by a general meeting of shareholders on the 26th, called on Mr. R. George Smith, the secretary, "at once to resign his office, and re-transfer to the directors in trust for the shareholders 2600 fully paid-up shares (26,000*l.*)." I need hardly add that Mr. Smith carried out the desire of the committee, and I am not aware of any remonstrance having been made by his friends. J. D. SHAKESPEAR, Chairman.

#### SILVER HILL MINING COMPANY.

SIR,—It is gratifying to learn that the list of applications for shares has been so well supported by the public as to ensure an early commencement of operations by the driving of the tunnel by rock-boring machinery. The Silver Hill tunnel will by this method be rapidly extended into the hill, and the lodes drained and developed without the necessity of machinery or shaft sinking. The geographical and geological conditions of this property are second to none in this district. Firstly, as before stated, the mine will be wrought by the tunnel level to the depth of 70 or 80 fms. without involving enormous cost in laying down pumping or winding machinery. Secondly, all the silver lodes and some of the tin and copper lodes are encased in a beautiful light blue clay-slate or killas formation close to the junction of the granite. This is a position, geologically regarded, precisely similar to that of the Redruth and Camborne districts, where so many rich mines have been discovered, and such vast mineral wealth brought to surface, giving great and continual profits to the fortunate shareholders of Dolcoath, Carn Brea, Tincroft, Cook's Kitchen, South and West Frances, and many other mines. The Silver Hill and the Kit Hill Great Consols Companies are the only two I know of in this district having such great advantages for exploring such large numbers of lodes to such considerable depths by means of tunnelling. The Silver Hill is situated on the south slope, and Kit Hill Great Consols on the north slope of the mountain. J. BUCKINGHAM.

*Callington, March 9.*

#### WHEAL GEORGE—VALUABLE DISCOVERY.

SIR,—Amongst the many mines that have received but little attention from investors I notice the Wheal George, situated in the D'Eresby Mountain lead district. As the operations progress doubtless good discoveries of lead ore will be made in due time. Another discovery, however, of a very startling and important character has been made there. In driving a level on the trial lode a deposit of fullers-earth has been met with. The galleries already laid open contain 6000 to 7000 tons, and the supply appears to be practically inexhaustible. I am informed the earth can be sold at a net profit of 3*l.* per ton. As Wheal George has only 15,000 shares of 1*l.* each dividends of cent. per cent. may be calculated upon, irrespective of any profits arising from the lead. A SHAREHOLDER.

#### WHEAL JEWELL.

SIR,—This mine is likely to revive the drooping spirits of parties investing in mines in the Marazion district, which 60 years ago was the richest copper producing ground in the kingdom. At the 40 fm. level, east of the great cross lode that runs across from Wheal Prosper to Great Wheal Neptune, Wheal Jewell standing in the centre of the two, a course of black and grey copper ore yielding 2 tons per fathom has been met with. The 50 is entering this rich ground, and a winze being sunk under the 40, 10 fms. ahead of the 50, is producing 1½ ton of grey and black ore, and daily improving. The engine-shaft is sunk to the 70, so that they will be in a position to open out ore ground quickly; whilst at Wheal Caroline, at the 70 fm. level west, and which is included in this grant, when that mine was abandoned, this level was left with a good course of copper ore standing in the forebreast. This course of copper ore is 200 fms. to the east of the present course of ore in the 40 east, and this piece of ground I have no doubt will turn out as rich as it did for the same distance at Neptune and Prosper, which produced, east of the cross-course named, millions of pounds worth of copper, and gave to the Messrs. Gundry of that day immense sums of money in dividends; and I shall not be surprised to see the shares, now at 15*s.*, go to 5*l.* before midsummer. Between Wheal Jewell and Wheal Neptune there is as good a mine as either Neptune or Prosper, which could be proved for 2000*l.* effectually. ABSALOM FRANCIS.

*Goginan, Aberystwith, March 9.*

#### THE TAVISTOCK DISTRICT.

SIR,—There has been a good deal of enquiry and prospecting in this district during the past week for mines. Recent improvements and consequent local stir in mining have been the means of inducing many agents and representatives of intending investors to pay the district a visit, and much surprise has been expressed at the vast extent of unwrought ground lying idle in close proximity to rich mines that are still being vigorously worked. It is the general opinion of practical miners here that the whole of the ground southward from the respective and important Crebors will ere long be the scene of active mining operations. I was much pleased with a remark that dropped from an authority in all that pertains to mining I heard a few days since, that all the lodes in this direction carried or showed a "proud back," meaning that they are rich to the depths already proved. In a future letter I hope to remark on the necessity and advantage of deeper mining in this district.

Great interest is being felt in the reworking of Rix Hill, Anderton, Walkham United, Sortridge, and others in this part of the district. I have just now seen some fine quality stuff from Lady Bertha, and also from Sortridge Mines, on the east and west of Walkham United, and I am more than ever convinced that the mines in this direction are destined to become famous for their great mineral production. Great interest has been felt in the town on account of the visit of two of the directors of Walkham United to the mines in the present week, and it is now hoped that operations in good earnest will speedily commence on their property. In addition to the vigorous working of the tin lodes, a most desirable point to reach in this property is the intersection of Sortridge copper lodes,

which are known to traverse both mines embraced in this extensive sett, and there is no reason to doubt that at its intersection, by pushing up the cross-cut in that direction, the lode will be found as famously rich as was found immediately to the east of this in Sortridge.—*March 9.* A. B.

#### TREVAUNANCE MINE.

SIR,—In stating that the lord of this mine received 200,000*l.* for "dues" some person has committed an error. The fact is that the lords (Mr. Enys and his ancestors) are said to have profited by working there—above the adit—the sum mentioned. They have worked there for centuries. The area of the mine is about one acre only. It is in one of the best tin districts in Cornwall. R. SYMONS.

*Truro, March 7.*

#### WHEAL RUSSELL.

SIR,—Allow me to correct an error which by some means occurred in my letter of last week on the subject of the Tavistock district. It is stated there that the shares of East Wheal Russell went from 3*s.* 6*d.* to 30*s.* per share. What was meant and what is correct is, that they advanced to 30*l.* per share. Such was the extraordinary value of the mine when last worked.—*March 9.* A. B.

#### ROOKHOPE MINE.

SIR,—I really cannot see that your correspondent "Bristo" has any just ground of complaint as to the liquidation of the Rookhope Company, and the establishment of the Northern. I was myself a shareholder, and, knowing the value of the mine, was greatly disappointed at its failure, and very glad to have a chance, however remote, of recouping my loss, a chance which your correspondent had equally with myself. This would never have been under a professional liquidator, of whom as a class I have from experience a profound distrust, but I trust there is a possibility of recovery under the management of the thoroughly honest and high-principled gentleman to whom the liquidation was entrusted. The whole thing was perfectly open and above-board; the shareholders were appealed to for help, the property was sold in open market, and bought for a fair and adequate price by such shareholders as chose to subscribe for the purpose, the opportunity for doing which was presented to all. Had it been otherwise, the mine would have been sold for a mere song, and your correspondent none the better; unless, indeed, his wishes were the other way, for I am perfectly aware that certain parties who knew the value of the mine, and were ready to pounce upon it if sold below value, were greatly disappointed that it was not so. It is a valuable mine, notwithstanding certain drawbacks surmountable by adequate capital and competent management. I knew it to be so, and, therefore, joined in the reconstruction, as your correspondent might have done if he had chosen, in which case I expect no complaint would have been heard. I have full confidence in Mr. Murchison, and I could only have wished that one or two other mines in which I was concerned, now irretrievably sunk, had been under his management, and received a similar chance of recovery. A "NORTHERN" SHAREHOLDER.

#### ROOKHOPE AND NORTHERN MINES.

SIR,—When people write letters complaining of a grievance they should take care not to misrepresent facts, but your correspondent "Bristo" has not been thus careful. He has made his misstatements either knowingly or through ignorance from not being a shareholder. As I do not suppose any official notice will be taken of a reckless anonymous scribbler I will just briefly reply to your correspondent, who indulges in that "fiction" which he imputes to others. He says that on June 18, 1880, he was informed of the sale of the mine, and he complains that nothing was done for the old shareholders. Now, the Rookhope shareholders were repeatedly urged to subscribe a sum—on the security of the mine and plant—to save the property and carry on the works, but after the most urgent appeals the amount required was not forthcoming. There was then no alternative but to place the company in liquidation, and dispose of the property by public auction. Your correspondent conceals the fact that a circular intimating this sale, and enclosing a prospectus of the new company, in which the shares were offered to the old shareholders, was issued to them on Jan. 29, 1880. I believe that the syndicate who purchased the property was composed of no less than 30 of the Rookhope shareholders. In the first instance there was 10*s.* payable on application and 10*s.* on allotment, but to accommodate intending subscribers the payments were reduced to instalments of 2*s.* 6*d.* each. In June the number of shares left for subscription was 1100. I find that the liquidation and the necessary accounts are being attended to in accordance with the Act of Parliament. If your correspondent is a shareholder he would have known, or could have ascertained, the above facts. A SHAREHOLDER IN THE OLD AND PRESENT COMPANY.

*March 8.*

#### THE GREAT LAXEY MINING COMPANY.

SIR,—A person of the name of Richardson, trading as a firm of "Richardson and Co.," of 11, Queen Victoria-street, publishes a monthly circular, in which he professes to advise the public as to various stocks and shares, and specially those of mining companies. This person for some months past has published most vile falsehoods in connection with the value of shares in Great Laxe, at the same time sending a copy of his circular to almost every shareholder in the company, many of whom have applied to the directors, anxiously desiring to know the cause of the very injurious reports. We have in consequence sent notice to every shareholder to caution them against believing the statements of Richardson, and in addition, I send you a statement of Mr. Richardson's dealings, and shall thank you to publish the same, and I think that will put a stop to the "circular" falsehoods. G. W. DUMBELL, Chairman of Great Laxe.

*Douglas, Isle of Man, March 9.*

#### GREAT LAXEY MINING COMPANY.

On Nov. 22 Mr. James B—, of Draycott, near Derby, purchased of Richardson and Company, of 11, Queen Victoria-street, ten Great Laxe shares, which he paid for on the following day. On Nov. 24 Richardson acknowledges receipt of Mr. B—'s remittance, and states that he will forward transfer for signature in due course. Richardson afterwards forwards a transfer for signature from himself to Mr. B— of ten shares dated Dec. 6 (at which time Richardson had no Great Laxe shares standing in his name. Mr. B— signed and returned transfer on Dec. 20. Mr. B— writes Richardson for the certificate, to which he replied—"We have not yet received your certificate. Immediately we do so we shall have pleasure in forwarding it. The directors meet monthly for the purpose of signing scrip. We suppose there has been no meeting since your transfer was received." This is all a fabricated falsehood. There is no such monthly meeting. When a transfer is brought in the Secretary forthwith prepares a share certificate, which is signed by the English directors, and delivered to the party in about three days. Mr. B—, still pressing for his certificate, Richardson writes him on Jan. 1—"On enquiry at the office of the company the Secretary informed our confidential clerk that the next meeting for the purpose of signing certificates will be in about a fortnight from this date (Jan. 1)."

This is all untrue. On Jan. 15 Richardson again writes Mr. B—"We have not received our certificate, but hope to be able to forward it by Monday's post." He also advised Mr. B— to sell these and his other shares in Great Laxe, stating that Great Laxe shares have fallen 10*s.*, and from information to hand we fear a still further fall in the price.

On Feb. 4 a transfer of ten shares, dated Jan. 31, 1881, was sent in to the London office for registration from Mrs. S—, of Tullamore, Ireland, to Richardson, and was duly registered, also a transfer of the same shares from Richardson to Mr. B—, which was returned for correction in date, and ultimately returned corrected and duly registered on Feb. 11. The seller of the shares, Mrs. S—, had considerable difficulty in obtaining payment for them from Richardson, but ultimately obtained a cheque from Richardson, which was dis-



honoured upon presentation. Mrs. S— subsequently obtained her money after threatening proceedings.

#### THE EAST LONG RAKE MINE, HALKYN MOUNTAIN FLINTSHIRE.

SIR,—As an occasional correspondent to your valuable Journal it gives me much pleasure to record increased activity in lead mining in this justly celebrated district. Within the last few months several companies have been formed to develop mines in this neighbourhood, and others are now in course of formation, and there is yet ample room for the employment of further capital, and with a judicious selection of the properties large profits can be realised.

Amongst the companies recently formed the East Long Rake Lead Mining Company (Limited) claims special notice, and as an old resident in Flintshire I make bold to assert it is one of the best properties that has been brought before the public for many a year. The lodes are numerous, traversing the sett east and west and north and south, and include some of the best known and richest in the locality. The natural advantages for working cannot be surpassed, a prominent feature being that the whole of the mine is drained to a depth of 120 yards by a "swallow," or subterranean water course; thus the necessity of erecting expensive machinery for pumping is obviated, and the company are enabled to produce ore at a very cheap rate, and at a large profit, even at the present low price of lead.

The company was formed about four months since, and during this short time a vast amount of work has been accomplished. Arrangements are now being made for the erection of powerful machinery for winding and crushing the ores, of which there will be an abundance to operate on; and I venture to predict that soon after the machinery is erected the company will be in the market with large monthly sales of ore, and will be an addition to your list of dividend paying mines.

In the opinion of mining experts who are conversant with the position and prospects of the mine, there are several great discoveries on the eve of being made, including the intersection of the rich "Gin lode" and "Wagstaff lode" in the 50 fm. level. Both of these have proved immensely rich at shallow depths, and it is regarded as a certainty that they will be found equally rich, if not increasingly so, at the 50 fm. level.—Feb. 28.

CYMRU.

#### OLD MINES AND NEW.

SIR,—Seeing in last week's Journal a letter signed "J. J. S." headed "Old Mines and New," I cannot refrain from commenting on it, although I do it reluctantly; I deem it requisite that such letters are likely to mislead. If the writer would be kind enough to ask his informant at the next interview whether he made a slight mistake or not by saying there was only one man and boy working in Redmoor the last three months at 18s. in 17. tribute. I think, then, by refreshing his upper story he would find it was himself that set the last pitch ever worked in Redmoor Mine at 10s. in 17. to two men and two boys; that was an arch of ground at the back of the 70 when the water was rising. The return the last month the engines worked was 48 tons of silver-lead. It is true there has been as much as 15s. and up to 17s. in the 17. given for lead only, in exceptional places in the mine where it was very rich in silver, the tributaries having no share in that; some of the ore produced over 60 ozs. of silver to the ton. "J. J. S." says Kit Hill Great Consols are an exception; we all agree it is a real good property, but we cannot yet believe the fence recently erected between the Duchy of Cornwall and the Lady Ashburton properties has been so miraculous as to have caused all of the lodes gone through these properties to come back from the one and to lodge in the other. It is a well known fact the Redmoor sett joins the Kit Hill Great Consols and Cornwall Great Consols Mines, and the lodes pass through Redmoor one mile in extent, and have been intersected by the working on the lead lode 125 fms. below the adit level, and has never been wrought on. In this property there are both kills and granite. I could not recommend sinking shafts in untried ground in preference to working such mines as Redmoor, where the shafts are sunk and the cross-cuts driven, and the lodes cut and still unwrought. Cullington, March 9.

JOHN BUCKINGHAM.

#### OLD MINES AND NEW.

SIR,—The letter of your correspondent, "J. J. S." in last week's Mining Journal contains some sensible remarks upon this subject, especially when he says he is of opinion that as good a field for mining enterprise as can be found exists in the extensive range of high ground stretching away north and west from the Caradon and Phoenix range of mines almost to Camelford. With regard to Camelford and district all at present is quiet, notwithstanding both copper and lead lodes are now to be seen opened at a few feet deep, producing ore, without anything further having been done on same. With regard to copper lodes, they are on the junction of the granite and kills, having the whole of the water-power of the River Camelford available for working purposes, and the lodes running through hills on either side, especially on the east side of the river, whereby extensive backs would be obtained. There is a curious circumstance connected with one of the copper lodes, which I will mention, and that is that from an old shallow shaft which was sunk upon it, nobody knows when, but at all events a great many years since, under certain atmospheric conditions a column of smoke (apparently) is often seen issuing from the shaft, so that the people of the village on the opposite hill have for years past called the place the "smoky chimney." What is the cause of this vapour, or whatever it may be? In this shaft at a few feet from surface is to be seen a copper lode which is about 5 ft. wide, containing the usual accompaniments of a good lode spotted with yellow ore and muddle. This lode is in kills, and can be worked with ample water-power. An old adit level is to be seen, but never driven up so far as the shaft in question, which level if continued for 40 or 50 fms. would come in and cut the lode at a depth of at least 30 fms.

All this work could be done at a very small cost. However, there it is lying neglected, while hundreds of thousands of pounds are to be spent out of the country in gold mines, not one in ten of which will ever pay. Verily there is a gold mania afloat, and it is just as well to attempt to whistle to change the wind as to attempt to stop the absurd speculations, not only in gold mines but also in some other mines which I could mention nearer home than India. I have been a miner all my life, and have worked in some of the principal mines in this country, and I unhesitatingly say that I have never seen more promising copper lodes or lead lodes than I can now show to any parties who may be disposed to make any further enquiry on this subject from me.—Camelford, March 7.

W. VINE.

#### OLD MINES AND NEW.

SIR,—I quite agree with the remarks of your correspondent, "J. J. S." in last week's Journal, in reference to the re-working of old mines, when there is so much unwrought mineral ground in the two counties of far greater promise. Take a retrospective view of some of the old mines which were resuscitated some years since. For instance, Great Wheal Vor, Great Wheal Busy, Crenver and Abraham, Ting-Tang, Wheal Rose, Great North Downs, Tywarthaile, and others of less magnitude which I might name. Where are they now? Only known as sad visions of the past; and if the large amount of capital which was expended on the re-working of these old mines was laid out in unwrought ground we should, no doubt, ere this have had some good mines now in full work, and remunerative. Look at the mania about 12 months since for re-working old mines in the Tavistock district, with the appellation of "Devon" attached, such as Devon Great United (formerly West Maria and Fortescue), Devon Copper, Devon Consols (West), Devon Friendship, all old mines with new names. Last of all is East Wheal Rose, nothing yet being done, and shares at a premium. As far as my mining experience of 40 years is concerned I have not yet known a mine with such imaginative prospects being abandoned. Poverty, in most instances, has been the chief cause of abandonment. Flash advertisements, glittering reports, and oratorical display appear to be the chief order of mining at present; and it is by those means the public, who are totally

ignorant of the real facts, have been induced to invest and await the result.—Liskeard, March 10.

NO PROMOTER.

#### CIRCULAR BROKERS, AND MINING PUFFS.

SIR,—Judging from the circulars with which I am continually being inundated a certain body of brokers must be coolly and designedly acting upon Carlyle's dictum that mostly fools go to make up the population of the kingdom. I am constantly finding the shakiest ventures and the most ridiculous schemes bolstered up into striking realities with a shameless evasion and amazing plausibility which makes me blush for honesty and honour. And what angers me more is the conviction that, unlike Mark Twain, these sharks have no need to go abroad for innocents; they find an abundance of innocents at home. As an example, I have this week received two circulars, with slips enclosed, puffing a lead mine (—), the capital of which is only the modest (?) sum of 100,000l. As the shares are certain to rise from 3l. to 4l. premium almost at once I am advised to telegraph for shares. Good heavens! Half-a-million of money for this speculation.

BULBOS.

#### MINING IN LLANARMON—NANT ADDA.

SIR,—My attention was called the other day to a statement in the Mining Journal of Feb. 26 respecting the above property which has a tendency to exaggerate its value, and as it appears that some correspondents are under the impression that the said information emanated from me I take the first opportunity to contradict it. There is nothing more prejudicial to a mining property than to give it a spurious reputation which cannot stand the test of a close practical inspection without being endangered thereby, and such being the case it is incumbent upon me after the remarks made to offer a succinct descriptive account of the mine in its present stage.

As I have upon a former occasion noticed its geological and physical outlines I will confine myself at present to simply repeating that the property is situated in the western bearing measures of the carboniferous limestone, and is developed by the extension of an adit level some 300 fms. in length, started at the base of a mountain that has its summit 1000 ft. above the level of the sea. For over 60 fms. the adit has been splendidly arched with stones raised in a quarry two miles off, because of their superior quality, after which it almost immediately intersects the Great Nant lode—one of the most important lodes in the locality. Upon this it is prolonged for about 80 fms. At this point a junction is observable between the Nant lode and another strong massive lode with a reversed underlie, which was abandoned after driving it about 17 fms. further. At the junction noticed a cross-cut is driven 20 fms. north to the Brynhaidd lode, which is the lode now being worked upon, and represents one of six others nothing inferior apparently in size or quality to it, as noticed in the extreme unproductive measures of the adit west. Upon this lode, within about 11 fms. of the cross-cut, a course of ore was met with by the former parties 3 ft. wide solid. This they followed for 10 fms. over the level, then becoming poor they left it in order to arrive at the ore said to have been worked almost to the depth of the level east. It appears that this was their principal object from the commencement, but although they had apparently arrived within 10 fms. of it (owing I am informed to the pecuniary difficulties of the principal partner) they failed to proceed any further. Such are the gleanings I have been able to gather of its past. The present will be confined in a very small compass and easily explained. With respect to its future, although at present it would be presumptuous to predict anything but sunshine and prosperity for it, yet the vicissitudes of mining even here must not be ignored.

I have mentioned that the former parties worked upon a course of ore 2 ft. wide. It appears that they could not very well account for the presence of this, but from a careful survey and close observation of the "runs" of the district it is obvious that its discovery should not have been purely a matter of speculation, forasmuch as its crop had for years been a subject of local history. With exactly the same reasons adduced in favour of the eastern run they should have also anticipated this. It is here that operations are now going forward. In the roof, or rise, the lode looks exceedingly promising, 4 ft. wide, well defined, and productive, made up somewhat as follows:—Carbonate of lime, 2 ft. 6 in.; bearing ground, 18 in.; length of stope up to date, 8 ft. In some places for this length the ore is solid for the width of the bearing ground—18 in. There are about 25 fms. of backs here. A most important point is the sump. The last valuable specimen that came from here weighed about 20 lbs., which is sufficient evidence that the run continues to hold good in depth. Within a convenient distance from this to prove and open out this ground a shaft has already been sunk to about 11 yards of the level, so that the cost of opening out this part will be comparatively trifling. The mine has been opened out thus far privately, and at some expense to the parties interested, and to develop the mine properly a larger sum is required than they can command. If this capital is not forthcoming from other quarters it is probable that a local company will be once more formed in order to perform the necessary work to bring the mine into a profitable state.

J. A. EDE.

Nant Llanarmon, March 8.

#### A RAMBLE THROUGH THE CORNISH MINES

SIR,—In leaving Redruth, the first mine I dropped on was Wheal Basset, where very good machinery has been erected on the North Basset part, and they have very good speed in forking the old mine; the old lodes that produced so much copper are now turning into tin downwards, and by what I am told good returns are expected by tributaries. But the main object is for working the rich flat lode, which is standing to the north; its underlie is south, and by sinking another 20 or 30 fms. it will be in the heart of the mine. South Francis lies to the west, and is now being wrought for tin principally on the flat lode. When tin was about 35l. per ton it paid good dividends; but here they have to make a certain amount of outlay for machinery, &c. After this is done it is expected that dividends will soon be resumed again. West Basset stands to the north of the said mine, is in the Dividend List, and well spoken of. South Condurrow has paid well during all the depression in tin, but I am told the returns are falling off; at the same time, the flat lode is changeable, and may improve again. Wheal Grenville stands to the south, and takes the flat lode at about 115 fms. below surface, where their principal workings are carried on. The mine is now well equipped with machinery, and the property is considered a good and lasting one. A dividend was paid last quarter, and but for the late severe weather the profits would have been the same for the next three months. They are erecting another axle with stone-breaker; when these are got to work the returns will be considerably increased. A large heap of tinstuff is now behind the stamps waiting to be pulverised; the agent tells me they have over 1200 tons, which means 25 tons of black tin. When the new machinery starts to work this will soon be put in the market. The company have spared no expense in order to bring the mine into a paying state; and from all I can gather they will be well repaid for their outlay.

South Tolvecarne has been working for some years, but with little little returns; a few months ago a change of management took place. Capt. T. Angove is the present manager, and it is generally believed under his able management that the mine will soon be brought into a paying state. He has sold more tin during the few months he has had the management than was sold the whole time of his predecessor, and the present manager is only going over the same ground. From here we started to Herland Cross, there refreshment; started again, and passed through the famous old Great Work Mine, which is now being drained by Capt. Teague; he is very plucky, and it is generally supposed that he will see his money back again with good interest. To the north, and on the western slope of the Warren Hill, is West Godolphin; here they are going on in a miner-like manner, and I heard but one opinion expressed—that the mine is sure to prove a success. Many lodes traverse the sett in a very congenial rock, both slate and granite; the bottom workings are now just at the junction. The engine, a 60-in., will be started in another month; the manager is Capt. Hodge, of Wheal Grenville, who, I was informed, knows the district well. Leaving here we made our way to Goldsithney; passing through Wheal Jewell we stopped a few

minutes, and examined some of the lodestuff, of yellow copper, black oxide, grey, and green carbonate, gossan, &c., the same as is found on the outcrop of large bodies of mineral; the district here is good, and I think that the mine will do well. On arriving at Penzance we sat down to our dinners none the worse for our ramble through the mines.

MINER.

#### WEST LISBURN MINE.

SIR,—I think that one of the most important reports upon this property, which has appeared in your valuable Journal, was that under the signature of "Capt. John Williams," in last week's issue (page 267). There is no better mining authority for this district than Capt. Williams, as was his father before him, and his statements on this particular mine have the merit of being based upon personal knowledge, and it will no doubt be satisfactory to many of your readers to have the fact stated upon such indisputable authority that this mine contains the Glog-fach and Glog-fawr—the two richest lodes in the Lisburne Mines. The Lisburne Mines, on a capital of 7500l., have already paid in dividends over 240,000l., and this great return has mostly been derived from the active working on the lodes named, and so far all seems to point to their maintaining in West Lisburne the great proficiency which has characterised them in Lisburne. I quite endorse what Capt. Williams says regarding the great amount of preliminary work which the present proprietors get the benefit of, and am glad he confirms the statement previously made, that there are from 1200 to 1500 fms. of stoping ground opened up, and ore in sight to the value of 10,000l. to 12,000l. With such statements and facts it is not difficult to foresee under ordinary circumstances the great future awaiting West Lisburne.

London, March 10.

PRACTICAL MINER.

#### SORTRIDGE CONSOLS.

SIR,—I am pleased to inform you that arrangements are being made by a very influential company in London for reworking this grand mine, and developing the numerous copper and tin lodes known to exist in the sett. It may be fresh in the memory of many of your readers that this mine during the last working was a great favourite with the public; it returned over 70,000l. worth of minerals, paid regular dividends, and the shares were extensively dealt in on the Stock Exchange. Nor is it generally known that the mine suspended operations from the failure of the last company to discover the main copper lode to the west of the cross-course, for it was to the east of this cross-course that the lode made so productive. Mr. Spry, the landlord, has by dint of much perseverance searched for and found the lode to the west of the cross-course, and opened upon it for 500 fms. in length—a splendid lode of gossan 4 to 5 ft. wide, mixed with spots of rich yellow copper ore, presenting every indication of there being a course of copper ore underneath equally rich, if not richer, than the lode ever proved to be to the east of the cross-course. There are three copper lodes and three tin lodes of great promise in this property, and if developed in a spirited manner will undoubtedly prove as valuable, and create at least as much sensation in our district as Wheal Crebor, South Devon, and Wheal Friendship.—Tavistock, March 10.

TAVY.

#### PROGRESS OF ELECTRIC ILLUMINATION.

SIR,—The representatives of the several systems of electric illumination—Jablochhoff, Jamin, Gramme, Werdermann, Denayrouze—which have been tested in Paris have been petitioning the Municipal Council of Paris to name a Special Commission to examine the propositions which they have to submit relative to the illumination by electricity of the public streets and private establishments, and I do not doubt that this commission will be nominated. I may, therefore, say that so far as experience goes there is nothing to justify the declarations made as to the causes which have led to the comparative failure of electric illumination hitherto. In the first place, it is stated that, owing to the small number of lamps employed, it has been necessary to use engines of low power, which consume thrice as much coal as large engines. It must be assumed that consumption per horse-power per hour is meant, as otherwise the statement would be untrue, and also more unfavourable to the electricians. Then they state that they employ as many persons to attend to comparatively few lamps as would suffice for ten times the number. Next, that they have to provide for the reimbursement of the capital in 10 years, whilst they ought to be able to spread it over 50 years, as is done by gas companies; and, lastly, that they have to struggle against a company which allows 50 per cent. discount to the City on the public lights, without having, like that company, the power to partially recuperate itself, but an extra charge upon private persons for the loss sustained upon the public supply.

Now, in the first place, will any electrician presume to say that there is no loss in carrying electricity from the generator to the regulator, and that the loss does not increase largely with every increase of distance—that is, if the loss be 10 per cent. on a distance of 1 kilometre it is 30 per cent. on 2 kilometres? Hence it follows that to light a city like Paris there must, for the sake of economy, be many generator stations. Again, is it not true that the most sanguine electrician would dread the responsibility of relying upon electric lamps (without gas to fall back upon) for public illumination? Is it not true that the result is seriously affected by the weather, and that the exact cause of the variation has not been ascertained? Then, as to the personnel, would electricians or gas suppliers state the relative cost per week of attending to 100 gas-lamps, and to the electric regulators, which could replace those gas-lamps. This is giving the advantage to electricity, because it has not yet been even proposed to remove the gas-lights, which all regard as indispensable, except during the few hours of maximum traffic. I estimate that cleaning and recarboning either a Jablochhoff or any other regulator and glass occupies from five to six times as long as is required with a gas-lamp; and, as artificial light cannot conveniently be made to turn a corner, I further estimate that one electric lamp will not satisfactorily replace on the average more than five gas-lamps. My contention is that the electric light companies have no reason to ask for any greater privileges than they now possess, since the experience of several years has proved that electricity, unaided by gas, is totally unfit for public illumination, and that where powerful light is required it is easy by the use of a little extra gas, as has been done in the Rue du Quatre Septembre and, I believe, in the Waterloo-road, in London, greater and more useful illumination than is obtainable from electric regulators—no matter what system or what arrangement is used—can be obtained with gas at from one-third to one-half the cost.

INGENIEUR.

Boulevard Malesherbes, March 7

WEST PHOENIX MINE.—The lode which was intersected in this mine about a fortnight ago has been cut through from wall to wall, and found to be about 14 ft. wide. A fair sample taken of all the stuff for this width gives a produce of 50 lbs. of black tin per ton; it also contains yellow, grey, red oxide, green carbonate, and native copper, and some splendid crystallised specimens have been taken out of it. The lode is unquestionably a rich one for tin, and the fact that it is reported to be worth 30l. per fathom in Vatcher's old shaft, on the boundary 70 fathoms east, evidently shows the continuation of its productiveness the whole distance between the two shafts, besides having 800 fathoms westward on its course from the new shaft. The commencement of the copper on the same lode in Phoenix United, which gave 180,000l. in dividends, was about the 40 fm. level. In West Phoenix it has made its appearance only 15 fathoms below the surface, and it is very hopeful indeed that in a few fathoms deeper a course of copper will be met with equal to what was found in the parent mine. The adventurers have undoubtedly a splendid property before them, from which it appears very evident that at an early date large and lasting profits will be received.

WHEAL COMFORT AND NORTH TRESAVEAN.—Captain Abraham James has just reported upon this property for one of the adventurers, who has placed it at the disposal of the pursuer for the information of the shareholders. He states that in the deep adit, west of Morcom's shaft, ten men are employed in stoping the bottom of the level, where the tin lode is from 6 to 8 ft. wide, producing fair average quality tinstuff, worth about 15l. per cubic fathom. The lode presents a kindly appearance, and seems well worthy of a more vigorous development at a deeper level; but this cannot be done until sufficient means have been provided to drain the water from the old mine. He has no doubt that by-and-bye other rich portions of this masterly lode will be found, even in this level and above it, which will well repay with good interest the money spent in searching for it. The 10 is driven east of Peter's engine-shaft about 20 fms. About 10 fms. from shaft a



small crossing was met with, which shifted the lode a little south, and from this point eastward the character of the rock is changed to a more decomposed state, and it is, therefore, more congenial for the production of copper ore. Here the lode begins to show more life and energy. It has been gradually improving from this point to the present end. At the crossing the lode will produce about 1 ton per fathom; it will now produce 5 tons, worth 25*l.* per fathom. The lode in the present end is 3 ft. wide; it presents a most promising appearance, and should it continue equally good for another 10 fms. the property must double in value. The district is famous for rich courses of ore, and Tresavean was one of the most productive mines that Cornwall has produced, and he sees no reason why this lode should not be equally productive. Tresavean lode was rich at very deep levels; the main body of ore was followed eastward, increasing in richness until the junction of killas and granite was reached. They have the same geological features on a parallel lode, accompanied by a moderate underlie, and who shall say that the rich lode now seen in the 10 east may not be the top of a large body of ore, from which similar results may be obtained.

#### REPORT FROM CORNWALL.

March 10.—Nothing that has transpired for some time in connection with mining enterprise has been of such great and general importance as the successful opposition to the extension of the dynamite patent. We say "successful opposition," but in one sense that is really little more than a figure of speech, for the case for the promoters really broke down by its own inherent weakness. They committed the blunder of attempting to prove a great deal too much by the aid of the most imaginative statement of accounts that has been presented to the public for a long time, and the ingenious device was at once seen through by the learned Judge before whom the case came. As we had said all along the company had been amply paid—nay, extravagantly paid—for the working of one of the simplest devices ever put under patent protection, and there never was the shadow of a claim for extension of time. The dismissal of the petition with costs is a lesson that may profit in other quarters. Henceforth the Dynamite Company must be content to sell at a fair market value or to meet the consequences of the competition which their excessive demands has stimulated. At the Dolcoath account it was stated that the saving in dynamite at continental as compared with English prices would be 1000*l.* a year—a very handsome economy to effect on one article. In the mines of Cornwall and Devon generally the saving will amount to many thousands, and in some cases will make the whole difference between profit and loss, or turn an even balance in favour of a dividend.

But this is by no means all. These are days in which mining is carried on with a rapidity of development hitherto unknown, and in which there is sure to be an increasing demand for these stronger explosives. In fact, the very existence of a mine may very well depend upon the extent to which it may be able economically to consume dynamite or its allies. The last word reminds us of another gain. It is not at all quite so certain a thing as we have at times been taught to believe that dynamite is the best adaptation of nitroglycerine at present, or that it is likely to continue to be so. Hitherto, however, other adaptations have been driven out of the field under the dynamite patent rights. Now they will be able to enter into competition, and we shall be very much surprised if ere long we do not hear of important results from this quarter. So far as mining is concerned, what has taken place is, indeed, an un-moved good, and likely to be productive of incidental benefit in many directions. It is an ample reward for the tact and unanimity with which the opposition to further monopoly are initiated and carried on.

After what passed at the Dolcoath account with regard to the stocking of tin we are not likely to hear much more of that operation, at least on any large scale, though there have been many times when it would not be difficult to prove that "stocking" for a reduced period would have paid. It is the length of time over which the stocking extends, and the consequent absorption of interest on the money which has to be borrowed to make up for the withdrawal of so much floating capital from the mine, that makes all the difference. At Dolcoath, making allowance for the fact that the quantity stocked was considerably over the estimate, it is clear that while there was actually a loss on the sale itself, the whole of the money paid for interest was a dead loss altogether. The black tin would have made just the same when the stocking commenced as it did when it was really sold, and the entire cost of the operation fell upon the shareholders. Of course if the same quantity had been stocked when the depression was at its depth, and sold at the same time it was sold, there would have been a profit, and we all know there have been occasions on which it has paid to hold on. In view of the great uncertainties to which the tin market has been liable of late years, and the apparent impossibility of making any very long and definite forecast, the experience at Dolcoath is likely, however, to have a very general influence, and henceforth we are not likely to hear much of stocking, except in the very limited sense in which a manager may prefer to hold over his produce for a week or two in the face of a rising market, or where he is convinced that a drop is of the merest temporary character. The principle is sound enough, and applied in many businesses, but clearly in mining experience it is not satisfactory.

West Chiverton has clearly fallen upon noisy, if not upon evil times, and so far the course of events has very fairly justified many of the predictions made a few years since. It is very difficult, however, to see what is to be gained by such proceedings as those of Tuesday, and by threats of winding up; and it is to be hoped that more reasonable counsels may prevail. The making of imputations broadcast is not the way to advance the interests of a mining property, or to relieve it from any difficulties under which it may labour. Nor are random statements as to the presumed value of a mine a whit better. It is a great pity there is not more practical acquaintance with mining matters on the part of adventurers generally.

East Wheal Rose, to the reworking of which we have at various times alluded, was this week fairly launched, and expectation will be mightily disappointed if this famous old mine does not once more turn out a prize. All accounts agree as to its immense reserve of mineral wealth at the time when a casualty of a wholly unexpected, and it may be said unprecedented, nature whelmed it in ruin; and its resuscitation seems to be entirely a question of the adequacy of the scale on which the operations are carried on. Certainly to deal with it in any less thorough manner than is proposed would be again to invite failure, but there is ample evidence that the present company fully appreciate the magnitude of the undertaking before them, and the practical way in which to reopen what is by many regarded as likely to prove as rich and as valuable a silver-lead mine as any in the kingdom. Altogether this, like the restarting of Wheal Friendship, is a most satisfactory development of mining enterprise.

#### REPORT FROM NORTH WALES, SALOP, AND CARDIGAN.

The slate trade in the Corris district still continues very brisk, and we also notice some slabs and slates lying on the Glandovey Slate Quarry wharf at Glandovey station. We trust that these are but an instalment of a still larger quantity, and that this, the newest of the slate quarries in the district, will soon become in a position to supply a large demand. We are in some danger of again being called to task, but nevertheless we will again mention the Bryn Dyfi Mine and the lode there which still continues rich and productive. The owners of this mine certainly have cause to be satisfied with it, and perhaps this is the reason we hear so little about it. It is reported that the large substantial buildings at the furnace which were formerly used as smelt works are to be turned into flour mills. They are certainly well adapted to this purpose, and have an abundant and constant water supply sufficient to drive all the machinery which they would contain. The limestone quarries and kilns at Llanymynech and Pattigwaen are, and have been for a long while, in a very depressed state as regards the amount of business in hand. This, we presume, is largely due to the depressed state of agriculture as well as to some extent to the weather.

The meeting of the shareholders of the Van Consols and Glyn Mining Company, on Wednesday, March 2, was of a very lively character. It lasted some five hours, and the time was chiefly occupied in a quarrel between the directors and the shareholders on matters relating to the accounts. A London shareholder moved the appointment of a committee of investigation to enquire into the accounts since May, 1878. This, of course, caused great excitement and much

discussion. Finally this resolution was withdrawn, and it was arranged that three fresh directors should be elected, and that the meeting should be adjourned for a month. It seems strange that the company should disagree among themselves, in the face of the reports made by Capt. Rich, of the South Condurrow Mine, and by Captain Vercoe, of Prince Patrick Mine, for it seems by their report that, in addition to an excellent field of machinery, this mine also possesses productive ore ground, as well as the prospect of becoming a paying property.

The Assistant Inspector of Mines for this district, Mr. Hedley, called attention, when at the inquest on the body of the man killed at the Brynkinallt Colliery recently, to the great advantages conferred upon members by the Permanent Relief Fund, of which the deceased man was not a member. By a contribution to the fund of 2*d.* per week a member secured to his family in the event of his death the sum of 1*l.* per week. The attention of colliers and others is especially called to this.

The letter in last week's Supplement, signed by "Llanarmon," both amused and flattered me. Let me again call his attention to my former report, and he will there find that the author of the books mentioned was at the time of my writing the report some thousand odd miles away. Truly he has made a remarkable jump at a false conclusion, but will I trust in future refrain from such violent acrobatic exercise. I note carefully the contents of both his letters, and shall, as I have already said, comply with his request as opportunities for doing so arise.

#### TRADE OF THE TYNE AND WEAR.

March 9.—The steam coal trade continues dull, and only a few of the works in Northumberland are fully employed. There is no probability of the Sound being free of ice for some time to come, so that it is uncertain when the Baltic will be opened for vessels. The improvement of the Blyth Harbour, and the formation of branch railways to this port, continue to attract much attention; the question is a very important one for the collieries in the vicinity, as the shipment of this coal at Blyth instead of on the Tyne would effect a reduction of from 1*s.* to 1*s.* 8*d.* per ton in the cost of haulage; and as the competition between this coal and the coal produced in other districts is very severe, this is very important. The question of miners' house rents in this county still causes much agitation, and the time has arrived when it must be settled in some way. It has been the custom for ages to allow the men a free house and coal in addition to the wages earned, and when a house was not provided money allowance was an equivalent; but during the late depression the money allowance has been discontinued in many cases, and this naturally causes much dissatisfaction. The masters have been often appealed to on the subject, and if some settlement is not effected shortly there is no doubt that serious complications will arise.

The shipments of gas coal, notwithstanding the extreme stormy weather of the last few days, have nearly come up to an average, the best shipments having been made in the middle of the week. Shipping movements have been entirely stopped since Thursday, and laden vessels are beginning to accumulate in the docks and harbours. Some more contracting has been completed this week for the supply of gas coals over the year to the Lower Baltic and North European ports. Enquiries are coming into the market for steam, but little business has been completed as yet. The coasting trade does not show any special feature. The rate of freights for steam and sailing vessels has not changed during the past two months. The delivery of small and other manufacturing coals has been very moderate, owing to the difficulties met with in navigating vessels of all kinds. The coke market is unaltered. The bulk of the men at Seaham Colliery are still out, and unless the men give way there does not appear to be any solution of the difficulty possible, excepting the expulsion of the men from their houses, and the employment of new hands, as the masters appear to be determined not to employ those who were guilty of rioting and intimidation a short time ago. The conduct of these men was certainly outrageous; they refused to work, although assured by the engineers, and also advised by the Union agents, that it was perfectly safe to do so, and yet they wished to prevent others from working. The conditions the men wish to enforce are that all of them be employed without exception, and on the same terms as before they came out, but there does not at present appear to be any probability that those terms will be complied with.

Satisfactory progress continues to be made at the extensive new winning at Marsden. An upper seam of coal, 5 ft. in thickness, is now worked for the engines and for Landsale, and large quantities of excellent limestone is also worked on the estate and sold in the district. A new winning for coal on the Hylton estate, midway between the Usworth and Monkwearmouth Colliery, has been long projected, but the design is not likely to be carried out in the present state of the coal trade. The Blaydon Main Colliery is to be re-started shortly, and additional and improved coke ovens are to be erected there. Coke of excellent quality was produced here for a long period, and also fire-bricks and other fire-clay goods of good quality. The general trade of the district has been considerably disorganised by the severe winter and heavy falls of snow, which still continue causing obstruction to land carriage on private railways and roads and seriously obstructing the navigation of vessels at sea. The general revival of trade which was apparent up to the middle of February has been considerably checked in most branches; the coal trade has suffered considerably, the iron trade in most branches, however, has suffered less than any other trade owing to the briskness in iron ship building and consequent great demand for marine engines, boilers, &c.

The sixteenth annual report of Bolckow and Vaughan has been published. The capital of this great company is now between three and four millions. The sum of 340,726*l.* 3*s.* 4*d.* is available for distribution; after paying good dividends 25,000*l.* was added to the reserve fund. The success of the Thomas-Gilchrist system of making steel from Cleveland iron is, of course, alluded to. The success of the system is now complete, the make of the steel will be largely increased, and at the end of the month the production of finished steel by this process is expected to be 3500 tons per week. Steel rails are made in large quantities, and angles, plates, &c.

The Iron Trade has been very dull during the past week, certainly more than it has been during the past four months, both merchants and makers are far from sanguine about the future course of the trade; the German trade only looks dull, and it is not expected that much crude iron will be sent to America this year. It is, therefore, expected that stocks will increase further. The increase of stocks in February, however, is not large. It compares favourably with January, being only 21,753 tons, as compared with 48,441 tons in the first month of the year. There is now a total stock of Cleveland iron of 407,318 tons on makers' hands and in stores. The quotation for No. 3 has been 38*s.* by merchants; No. 4 forge, 37*s.*, prompt delivery.

Messrs. Connal's stocks are still increasing, and are now 150,036 tons. No. 3 warrants are about 39*s.* 6*d.* The suspension of the Darlington Iron Company has caused much regret; there is no doubt that the creditors will be paid in full. Manufactured iron is also falling in value; 6*l.* 10*s.* has been accepted for ship-plates, 5*l.* 10*s.* for bars, and 5*l.* 12*s.* 6*d.* for angles. The iron shipbuilding trade is more quiet. Engineering works are doing better, and the large railway works in the district can hardly overtake the work they have to execute. Foundry work, with some exception, is quiet. The steel rail trade is brisk, but there is much competition, which keeps prices down. At Middlesbrough on Tuesday there was a better tone about the iron market. Iron has risen in Glasgow; sellers asked higher rates. No. 3 was sold at 38*s.* 3*d.*, No. 4 forge being 37*s.* 6*d.* for present delivery; makers ask higher rates. The shipments of pig-iron last week were retarded by the foul weather; the deliveries were under 15,000 tons. On the other hand, manufactured iron and steel were more largely sent away, amounting altogether to 5000 tons. Steel rails have been going to India, Australia, &c. There is some demand for hematite pig-iron for America, and a considerable trade in this class of iron and in steel blooms is expected to continue. The effect which the stoppage of the Darlington Iron Company produced last week has disappeared. A strong effort is being made to reorganise the company, and carry on the business chiefly in steel, in which branch the company engaged a few months since. The orders for

railway materials and pipes, which were expected to come in freely, have not yet appeared to any great extent, and the foundry trade in consequence keeps quiet, while prices are low. In coal and coke there is a quiet business; best coke 10*s.* to 10*s.* 3*d.* at the ovens for furnace purposes.

The lead trade in South-west Durham has improved considerably of late; there has been a great demand for lead piping, and considerable quantities of lead have been sent from the smelting works. This trade has been dull for a long period, but a revival has taken place. The annual report of the Green Hurth Lead Mining Company has been issued, which is favourable; there has been increased production, the lead ore raised amounts to 820 tons, about double the quantity raised in the previous year, the price received had been very low, but a profit of 5331*l.* 1*s.* 9*d.* had been realised; 3520*l.*, equal to 11*s.* per share, has been paid in dividends. Important works for developing the mine had been carried out. The transfer of a portion of the sett to a company who would explore and work the veins in the ground had been completed during the year.

A very satisfactory change took place in the weather on Monday, and the fleet of steamers which had been detained since Thursday all got to sea, and the Tyne Harbour has been well cleared. Several vessels have also arrived, and more are expected, so that business is expected to increase considerably during the present week. More satisfactory intelligence has also been received from the Sound ports. Two Danish steamers have succeeded in getting through the ice, and have arrived at Elsmere, so that there is a better prospect of the early opening of the Baltic.

#### REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

March 10.—There is now no difficulty whatever about getting a good supply of coal, and owners are not quite so firm in their demands for top prices. Some holders are offering to book orders forward at current rates. Consumers are, however, not prepared to give the prices. Cokes generally are dearer. Staveley coke is priced at 17*s.*, lately it was 2*s.* less. The rise is not due to any great extra consumption, but chiefly to recent demands by the men. Blast-furnace proprietors and holders of pig are, as a rule, prepared to consider any reasonable offer, prices being generally no firmer. Of the pigs made in other districts, and largely used in North and South Staffordshire, Cleveland is stiffest in price. Northamptonshire and Derbyshire are 45*s.* bare per ton. A few weeks ago they were 50*s.* full. The chief feature of life in the finished iron trade this week is a continuance of the enquiries for cotton baling strip on American account. For cotton ties complete—blackened, bundled, and with the buckles ready attached—one maker has declined 7*l.* 5*s.* Marked bars are to be had at 7*l.* 10*s.* to 8*l.* 2*s.* 6*d.*, good mediums at 6*l.* 5*s.* to 6*l.* 10*s.*, and common at 5*l.* 15*s.*

Delegates and the recognised agents of the miners of North and South Staffordshire (including Cannock Chase) and East Worcestershire held a five hours' conference in Wolverhampton on Wednesday to consider a scheme for the proposed federation of the above-named districts. The object of the federation is to enable the miners to secure better wages. The opinion was expressed that if the men were united the masters would pay more attention to their demands. The delegates reported that the miners in each of the districts which they—the delegates—represented were in favour of amalgamation. Ultimately it was decided that a central fund should be formed, and the miners are recommended to contribute 4*d.* per month to it. The conference meets again, when the question of contracting out of the Employers' Liability Act, and the formation of a general permanent relief fund, will be discussed.

A joint court of the Arbitrators of the South Staffordshire Mines Drainage Act and five of the Commissioners has been held in Wolverhampton to hear appeals against the draft award for the amalgamation of the Bilston and Tipton districts. As no opposition was forthcoming the draft was made absolute. At a meeting of the Commissioners in Wolverhampton on Wednesday the Chairman stated that measures were being taken for the re-starting of some of the engines that have been standing so long in the Bilston district with a view to the pumping of the mines as far as funds would allow. He was of opinion that the position of the public would be changed towards the Commission when trade revived; instead of as now being looked upon with disfavour it would be admitted to have been of much benefit to South Staffordshire.

REMARKABLE BANKRUPTCY CASE.—FORTY-SIX YEARS IN LIQUIDATION.—At the Birmingham Bankruptcy Court, Mr. Tarleton applied on behalf of certain creditors of John Fisher, Thomas Fisher, and Mary Simmonds (whose bankruptcy extends so far back as 1835), that certain assets, consisting of mines and minerals in Leicestershire and Derbyshire, should be realised for the benefit of the creditors. The bankrupts, who were bankers in Ashby-de-la-Zouch, failed 46 years since with debts amounting to 130,000*l.* and according to an affidavit the mines and minerals (which have now become very valuable) were reserved when the surface property belonging to the estate was disposed of. The application was opposed on behalf of Mr. Fosbrook, the only surviving assignee, who said the minerals were disposed of in 1838 to the Marquis of Hastings, and also that by order of the Court all the documents relating to the bankruptcy had been destroyed. Mr. Fosbrook also intimated his willingness to resign his trusteeship.—The Judge said it was improbable that any Court had ordered the documents to be destroyed, and he ordered a meeting of the creditors (most of whom are dead) to be called for the appointment of assignees in the place of those who are deceased, and giving Mr. Fosbrook permission to resign after that appointment.

#### REPORT FROM DERBYSHIRE AND YORKSHIRE.

March 10.—The snow and floods which prevailed during the whole of last week as usual interfered a good deal with mining operations in some parts of Derbyshire, more especially in the lead mining districts, where the works are open and mining carried on in the same state as it was two or three hundred years ago. Of course in the few instances where there is a good covering overhead and the shafts well protected, business has gone on much as usual; but the production of lead is still of a comparatively moderate character. At the Magpie Mine there was a fire on the surface a few days ago, but the damage was not such as to materially interfere with the underground operations. The colliers have been working well, to some extent owing to disputes and strikes in other districts from which the trade has been driven away by the action of the men. The miners have been able to work full time, and have been contented, and the result is that some of the largest companies have unsolicited given their men an advance of wages. The Staveley Company, whose miners and ironworkers, it may be said, enjoy exceptional advantages, have increased the wages of the colliers 2½ per cent., which is to be continued up to the last pay-day in April. The Clay Cross Company, one of the largest in the Midland field, and which sends upwards of a quarter of a million of tons of coal to London annually, has also given an advance of 6½ per cent., so giving back to the men what was taken off last year, and it is expected that some of the minor companies and firms will follow in the same direction. A good business continues to be done with the Metropolis in Silkstone and other coal from Clay Cross, Eckington, Grassmoor, Blackwell, and other collieries; but it must be said that the owners do not participate in the increased prices which have been charged to consumers during the last two months. Heavy contracts, at anything but remunerative prices, were entered into last year for forward delivery, and these have not run out, and by the time they have the trade in all probability will be dull and prices much lower to consumers than they now are. Steam coal is in rather better request, and the demand may now be expected to gradually increase, whilst prices should also improve, for they have been such as in most instances to lead to a loss. The railway companies have had their locomotive coal at less than 6*s.* per ton, which so far from giving a profit must have led to a loss at many collieries. Engine fuel has gone off well, but there is not much likelihood of its continuing now that the miners in Lancashire have resumed work and that the strike in South Yorkshire is likely to collapse. At the ironworks in Derbyshire there has been a moderate business done in both raw and manufactured iron, but the pro-



duction of the rolling mills is far below what it could be were there orders in hand. The steel rail mills at Dronfield continue busy, and are likely to be so for some time to come, owing to the large orders in hand.

In Sheffield some of the principal works are becoming more active, and at Sir J. Brown's several puddling furnaces that have been standing for months past have been lighted, principally for supplying the material for the armour-plates that are now being made for the Admiralty. These plates, it may be said, are what are termed composite, the front being steel and the back iron, and are patented by Mr. Ellis, the Chairman of the company. Ordinary plates for ship-builders and boiler-makers continue in fair request, and there is also a good demand for telegraphic and other wire. Bessemer rails are being largely produced, but the price of the raw material has declined of late from 2s. to 3s. per ton. Railway material, such as springs, axles, tires, wheels, and wagons, are keeping the makers busy. Some heavy orders have been received from America for cutlery, especially the favourite "bowie" knife, which appears to be an indispensable weapon in some portions of the States. Second qualities of cutlery have also been inquired for on Australian account. Edge-tool makers have been kept well going, and a steady business is being done in files and saws.

Last week some 10,000 or 12,000 miners were out on strike for an advance of wages, and there appeared a strong determination to keep out unless an advance of 10 per cent. was conceded. It now appears that the strike has collapsed, and during the last two or three days the men have been going in at the old rates. Such a complete *fiasco* has scarcely been known in the history of trade disputes, and the leaders are now blamed for having put the men in a false position. The employers stated that they could not make any advance, and offered to submit their books for inspection, so as to show that they were no better off now than they were last year. In the district, however, trade is less active than it has been, owing to the change which has taken place in Lancashire; but, as might have been expected with so many pits standing, those at work have been doing well.

Sir H. Jackson, Bart., who only last week was appointed a judge in the High Court, but died suddenly on Wednesday before he had taken his seat on the judicial bench, was one of the principals in the Clay Cross Coal Company, of which his father was the founder.

#### SOUTH STAFFORDSHIRE AND EAST WORCESTERSHIRE INSTITUTE OF MINING ENGINEERS.

At the usual monthly meeting at Dudley on Monday (Mr. Thomas Brettell, President, in the chair), Messrs. T. Morgan, M.E., Walsall, and J. Phillips, M.E., West Bromwich, were unanimously elected members. In the discussion of Mr. W. J. Hayward's paper (previously read) on the Employers' Liability Act, Mr. W. J. DAVIES said that he agreed that it was a subject full of difficulties, but he thought that by an interchange of opinions they might reduce some of the difficulties and come to a proper decision. This would be a boon to the whole district, for their colliers worked under conditions different to any other, and they were considerably affected by the size of the majority of their collieries. Mr. Hayward, too, mentioned another difficulty, and that was in reference to the trouble of ascertaining the exact nature of the accident. Upon this he had taken the experience of a large colliery for the last five years, and found that the fatalities numbered three and the casualties 254. One was burnt, one was crushed, and one died from a fall of coal. The non-fatal accidents were chiefly hurts to the arms, hands, legs, and feet, and were of a kind for which the master would not be liable unless, indeed, a court of law said so. None of the accidents, as far as they now knew, could be traced to the negligence of the employer. The Act, he thought, should be interpreted in its spirit rather than in its letter, and its spirit was to benefit the men. Mutual insurance would do much in that way, and it ought to be resorted to in order to maintain the good feeling between masters and men. In answer to Mr. JOHNSON, Mr. DAVIES said the company he represented had proposed to give 70s. for death, 45s. for total disablement, and weekly sums for accidents ranging from 4s. to 22s. per week; but after consideration agreed to give 100s. for death, 75s. for total disablement, and sums from 4s. to 12s. per week for 13 weeks. It was always open to miners to vary this a little. The pay was 3d. per week for men and 1d. for boys.—Mr. JOHNSON thought 13 weeks was not long enough.—Mr. DAVIES, in answer to Mr. WARDLE, said that in the event of a man being hurt and the colliery stopping, the man would be entitled to his money from the insurance company.

Mr. ALEXANDER SMITH had collected information, and found that in Northumberland and Durham by only a very small majority the men agreed to remain under the Act. In South Lancashire and Cheshire the scheme of mutual insurance was agreed to in substitution of the Act until the delegates and promoters of the Employers' Liability Act interfered. In North and South Wales the insurance of masters and men was progressing favourably. In these cases the insurance was really mutual, because there were no shareholders to reap a profit, and no heavy management expenses. The mutual society could be more liberal as to time and in doubtful cases than a company, and the security was greater. He thought insurance on the plan mentioned in Mr. Campbell's pamphlet was an excellent thing, and insurance altogether was better than depending upon chance contributions. He also gave from the pamphlet a history of the formation of the several mining insurance societies now in operation, and also full details of their principles and success. He had been impressed whilst attending the meetings of the Mining Association of Great Britain with the many advantages of mutual insurance, and supporting a society of that description could not be formed in the South Staffordshire district, as an alternative he knew of nothing better than the plan advocated by Mr. Davies. He had written to Mr. Maskell W. Peace, secretary of the Mining Association of Great Britain, who was always ready to afford information—and he considered him a great authority upon this subject—and had received a telegram, in which Mr. Peace said the difference between the two kinds of insurance would depend much on the kind of local circumstances, but he should say the public insurance was likely to cost the most. He (the secretary) had written, explaining how matters stood as to the larger masters and men.

Mr. JOHN HUGHES expressed his obligation to Messrs. Hayward, Davies, and Smith for the trouble they had taken to get at the figures, but they ought all to remember that unless they could offer the colliers great advantages they could not depend on the support. It was owing to the peculiar nature of the custom of the country. At present the Thick coal men paid nothing, and, therefore, great advantages would have to be shown them.

Mr. JOHNSON, in answer to Mr. WARDLE, said that the Thick coal colliers subscribe as it was wanted for deaths and accidents.

Mr. HUGHES explained that every new man employed must sign a contract note.

Mr. HAYWARD felt that Mr. Davies's illustration of colliery accidents was a fair one for the South Staffordshire district, and afforded a fair basis. The plans as adopted by the Earl of Dudley and the Sandwell Park Colliery Company were sufficient to provide for the safety of the masters and the interests of the men. With small collieries it would be different, and a scheme of mutual insurance in them would not be satisfactory he felt sure. As to the taking up of the business by the regular insurance companies, he did not think it would add to the expense, for most of the companies had large staffs of officials, and the taking in of the collieries could be done with but little addition to the ordinary working establishment.

Mr. JOHNSON, in reply to a question, said he had made an arrangement at Sandwell by which the men were to have the assistance of a surgeon and medicine as before; and, in the case of total disablement, 6s. per week, and 3s. for boys, such allowance not to exceed two years; and if at the end of two years they were still unable to work 10s. would be given them in full settlement. The widows were to have 2s. 6d. per week during widowhood and good behaviour, and 1s. for each child until it was 12 years old; but there was to be no allowance coal to widows unless, indeed, the circumstances were very distressing, and then the coal was to be a gift only. He could say, however, that during the 10 years of Sandwell there had not been an accident for which the employers could have been made responsible.

Mr. JOHN HUGHES said that Lord Dudley's officials had been free for 33 years.—Mr. FARNWORTH thought it would be well if they could circulate the information of the pamphlet among the men, and show to them by other means how seldom the masters were liable. The firm which he represented had not been liable for 40 years.

Mr. A. SMITH (secretary) did not think the masters looked at the matter in that light altogether, and he knew for a fact that the mining proprietors never for a moment wished to evade or shrink from their liability; but it was the trouble, annoyance, and expense of legal proceedings, and the consequent uncertainty, which was irksome. Whilst the compensation was limited, solicitors and legal costs were unlimited. He thought the mining engineers ought to raise their voices and show what was the best course to pursue—and he was certain that was mutual insurance—to cement the good feeling between masters and men. Seeing that the debate would not close that evening, and it was of such importance, he moved the adjournment of the discussion. This was seconded, and carried unanimously.

#### Meetings of Public Companies.

##### RHODES REEF GOLD MINING COMPANY.

The statutory meeting of shareholders was held at the Cannon-street Hotel, on Tuesday.

Sir DAVID SALOMONS, Bart., in the chair.

The CHAIRMAN said this was the statutory meeting, and generally no business was transacted at such a meeting; but he had a considerable amount of information to give, which he trusted the shareholders would agree with him in thinking satisfactory. In the first place, the whole of the legal part of the formation of the company and the acquisition of the estate had been carried through with the utmost care, and the board had been assisted most materially by Mr. Lattey, the solicitor, and the two eminent counsel, Mr. P. Beale and Mr. H. Green. On the telegram reaching the directors that the conveyance had been effected in India, the remaining 30,000s. would be handed over to the Devala-Moyar Company. This would be done some time in the next two months. The circular which had been sent to the shareholders, and which no doubt they had all read, contained generally the information which the directors had to give them, which had come to them since the formation of the company, and he thought it was very satisfactory so far. (Hear, hear.) Since Jan. 25 (the date of the previous letter received from Mr. Brough Smyth) another letter had been received from that gentleman, and he would read such parts as referred to this company.—

I believe the reports and telegrams I have forwarded since I returned, being plain and unadorned statements, will satisfy all reasonable men of the great value of your property. I have written numerous letters to the Government, and at last they profess to be alive to the importance of our interests; and I believe from frequent conversations with Mr. Adam, our new governor, that much will be done for the mining interest. I have arranged for the transport of machinery. I have carefully instructed all the officers in writing, given them written orders for work to be done in my absence, and arranged with the authorities for procuring labour through Mr. Armstrong, who seems to have great influence with the coolies. Rhodes' reef surprises me; the stone, where we touched it in the parts newly cleared, seems to be of the same character throughout, and my coolie servant always brings me a lump of specimen showing free gold when I visit the reef. Mr. Barnes informs me that he has come upon what appears to be old native workings in the upper part of the reef; there is a grand property here, as well as I am able to judge. During the short period I have been here I have left no stone unturned to serve the interests of the two companies, and I shall continue to labour in the same spirit, and with a view to give effect to the views of the board. It is my earnest desire to make a success—as, indeed, all must know—and that as quickly as possible.

As far as the letter went it was highly satisfactory. They must bear in mind that they had one great advantage if successful (and there was no reason to doubt they would be successful), and that was that in the manufacture of gold, if they might use the expression, they always produced a substance which had a market price of one value—about 32. 10s. per ounce as it came from the amalgam. It was not like the manufacture of certain goods, where the market value varied from time to time, and if work went on well and successfully they would always be able to sell gold without fear of overstocking the market. On reference to mines generally, they had been worked to a very great depth, and always producing profits as long as the gold was produced in certain quantities. Here there appeared to be a true vein, and the directors hoped to find gold continually, and not to get less but more as they went in depth. The company had now been established about four months, and the machinery had gone out, that was to say 15 steamers had been shipped, and the remaining apparatus for reducing the reef would be shipped by about the 20th of this month. The method of proceeding came to this. They hoped to get all the machinery out by the beginning of May, when Mr. Brough Smyth would be expected back with a mining staff from Australia. He would arrive at Beypore or Calcutta on the coast, and then there would be a month or six weeks to get it from the coast to the mine. Government had repaired the roads and bridges, and a good deal of machinery had gone up there, and many difficulties had been overcome. A large number of iron houses had gone out which were being erected. A sufficient quantity of wood could now be obtained for the framework of the iron houses, so they might hope to have them all up in June, so during the monsoon if it went fortunately they would be getting the machinery in order, and starting at the close. In future years they hoped to work during the monsoon, so if everything turned out as was hoped, they might get returns by October. (Cheers.) The machinery was constructed and arranged on the most approved principles, and what in former times was considered waste was now most valuable property. Without going into the question of iron pyrites, he might mention that what was considered a difficulty 25 years ago was no longer regarded as such. On a recent occasion it was stated at a meeting that there was considerable difficulty in obtaining a sufficient amount of water on this estate. He would call their attention to one or two points. When Mr. Brough Smyth went over there he stated that there was a considerable amount of water, and this had been confirmed. This was the dry season, just like autumn in England, the dry season before the monsoon, which usually broke about the beginning of June. On Jan. 25 they were using a stream of water for removing the overburden, and Mr. Brough Smyth laid no great stress on this point, but took it as a matter of course. When they got a certain amount of labour, and dammed up the water, they had great hopes of working the machinery wholly by water instead of steam. He would read an extract from a letter from Mr. James Stenlake, who was the mining captain.—

The clearing the overburden from the reef is being continued, and we find a great advantage in the removal of the water being brought in at a higher level. The reef is now exposed 36 yards in length and 9 yards in breadth, showing a large quantity of quartz, which, when the machinery is erected, can be taken out with great dispatch.

That letter was highly satisfactory, and showed they were not idle. Mr. Brough Smyth left early in February for Australia, and was expected back in May with gold-saving apparatus, which he could get better over there. This apparatus was chiefly made of wood, and could be brought easily. He was also going to bring back a regular mining staff, who had had great mining experience on the gold reefs of Australia. This was considered to be the quickest policy, and no time would be wasted, and after being in work some months this company might be more advanced than some companies which had been at work some years. In former times miners got gold from the district, and if the statistics could be taken as correct the gold taken by Solomon for the Temple was 650,000,000, and the Mohammedans carried away 200,000,000, and the Afghans 40,000,000, and yet the refuse was paying, and quartz in the reef produced 1 oz. of gold to the ton. He would conclude by saying that the board felt nothing had occurred to damp the enthusiasm in the cause of this mine, and they were using every effort to do their duty with every possible dispatch. Before two months were over they would see the results in the adjoining mines, and in six or eight months from this company's mine. He believed these results would not be unsatisfactory, and the directors would feel their time had not been wasted. (Cheers.) In conclusion, the Chairman said he should be happy to answer any questions.

Mr. BLADEN said the board had nothing to do with the price of shares, but it must have been a disappointment to many shareholders to see the shares fall to a discount. No doubt many Devala-Moyar shareholders had allotments and sold out, which he thought was hardly fair to those who went in as regular shareholders, and bought at a premium. It would be agreeable if the Chairman had stated whether there was anything in the reports received to cause disappointment, or make the shareholders suppose that the statements in the prospectus would not be carried out. It was estimated that 13 dwts. per ton would give 25 per cent. on the capital, and he hoped the Chairman would be able to tell them that they might expect 30 or 40 per cent. more than that, as Mr. Brough Smyth led them to suppose that the yield would be something more.

Mr. FERGUS asked whether the machinery could be landed at Beypore or Calcutta at all times of the year?

Mr. JOSEPH said he did not know how the shares were originally allotted to the Devala-Moyar shareholders, but they certainly had a right to sell. He hoped the Chairman would not give an assurance to the shareholders which would raise the shares against him. (Laughter.)

Mr. WILLIAM ABBOTT said he thought no better evidence could be afforded of the great interest taken in the discovery of gold in South India than the large and influential meeting which he had the honour of addressing. It was no part of the duty of the Chairman of a gold mining company to give advice to shareholders who wished to part with their shares, or those who desired to come in, or any information as to what the Devala-Moyar shareholders might have done with their Rhodes Reef shares, but it was his duty to express an opinion of the property, and give an account of what had been done for the benefit of the property. The Chairman got much touched at a point to which he intended to advert, and that was the advisability of Mr. Brough Smyth surrounding himself with a large number of skilled Australian miners, as they were doing in a kindred company in which he was connected. He was glad to hear the Chairman speak kindly of the surrounding companies, because he believed the great strength of this and the surrounding companies was unity of management and confidence, and not jealousy as to who should first return gold. (Cheers.) He was a firm believer that they would see an extraordinary amount of prosperity in these companies. Those who were disbelievers, and were anxious to gain a temporary profit by disposing of their shares, would be the very first to return and increase their investments. He was satisfied with the manner of the Chairman that the reversion of King Solomon was worth a good deal. (A laugh.) He believed the taking over of the large contingent of Australian miners by Mr. Brough Smyth

would have the effect of inducing many of their companions to follow, which would tend to the benefit of this and other companies in the district. (Cheers.)

Mr. ALEXANDER asked how many stamps it was proposed to erect? He should think 40 or 50 would be sufficient to start with, and they could afterwards be increased to 100?—The CHAIRMAN said he thought he had answered that question in his opening remarks. The number of stamps gone out was 15, and 10 more were ready to go. By the end of the year 25 would be at work, and the number would be increased as they were required. The statement in the prospectus was based on the assumption of 100 stamps passing a certain height per day. That was founded upon statistics taken in Australia. As he had said they would erect 100 stamps if it became a paying concern, and there was every reason to believe it would be a success. The machinery could be landed at Beypore or Calcutta at any time except during the monsoon. Of course the directors could not be responsible for the price of the shares. If one man chose to sell and another to buy, it was their business and not the directors', but he might mention that nothing whatever had happened to justify the fall—he thought it was rather the other way. (Cheers.) The Australian staff which was being brought over was considerable, and the ablest hands would be retained for the heads of departments. The mine was on a hill, and could be worked by adits, but possibly a shaft might have to be sunk. It was believed they could work during the monsoon, as they were under shelter and on an incline, and all the machinery under shelter. The Australian miners would be captains of gangs. Labour was at present cheap, but it might rise a little.

Mr. STAPLES also spoke in favour of gradually extending the number of stamps. Mr. JOHNS said the best policy was to see how the mine paid, and increase the stamps as they were wanted. He moved a vote of thanks to the chairman and directors.

Mr. WILLIAM ABBOTT, in seconding the resolution, said there was not the slightest chance of the failure of this company. In a very few weeks they would see the result of operations in some of the neighbouring properties. Mr. Brough Smyth stated that this mine was one of the best in South India, and he was sure that under these circumstances the shareholders would not separate with any gloomy feelings. (Cheers.)—The resolution was put and carried.

The CHAIRMAN, in acknowledging the compliment, said the policy of the Board had been that of rapidly with economy, and he hoped and believed the result would be successful.—The meeting then broke up.

##### NEW PRINCE OF WALES SLATE COMPANY.

A special general meeting was held at the offices of the company, St. Clement's House, Clement's-lane, on the 4th inst.—Mr. GEORGE J. GRAY (the liquidator) in the chair.

The CHAIRMAN said he should not trouble the shareholders with the past history of the undertaking, as they were well acquainted with it. The company had started with first-rate prospects, which ought to have been, and might have been, realised but for the unwise step taken by the old company in the matter of the purchase of the royalty on the Prince of Wales Quarry. This, however, had since been carried out and paid for, so that for the remainder of the term of the lease (25 years) there was no rent, or royalty, or compensation for surface damage to pay, which placed the property in a very advantageous position as compared with others where a heavy royalty was exacted. As the shareholders were aware from the circulars sent to them a very valuable vein of slate was being opened up in the neighbourhood of their property, and the opinion of professional and practical experts had been recently obtained upon the Prince of Wales Quarry. They all agreed in this that the vein of slate referred to passed into this company's property, and that had the workings been directed to this westerly vein instead of to that on the east the result would have been very favourable. In view of these opinions and of the considerable improvement in the slate trade the present meeting had been called to consider a scheme of reconstruction, of which a copy had been sent to each shareholder, as also notice of some modifications to be made therein. The concessions made by the debenture-holders were so favourable to the interests of the shareholders that he believed they would do well to preserve their stake in the property, and might expect at no very distant date to realise a good return on their investment, as everyone acquainted with such matters knew that a good slate quarry was one of the most profitable undertakings that could be met with. In conclusion, he stated that a considerable number of shares had been applied for under the scheme, and it would be carried out forthwith should it be approved by the meeting.

The CHAIRMAN then read the further modifications required to be made in the scheme, as explained by the solicitor, and it was then proposed by Mr. BORSO, seconded by Mr. HYSK, and resolved unanimously—"That the scheme for reconstruction of the company as altered according to the revised print thereof, submitted to the meeting and signed by the Chairman, be and the same is hereby approved."

The CHAIRMAN explained that a final meeting of the shareholders would be called under the direction of the Court to pass the scheme as now agreed to.

The scheme of reconstruction provides for the capitalisation of the interest due on the debenture debt, 11,750s. up to March 31, 1881, and the reduction of the interest on the debentures from that date to 5 per cent. It also provides for the cancellation of the existing 756s. 6d. of 5s. debentures, and the issue in lieu thereof of 756s. new shares of 5s. each, with 3s. per share credited as paid up thereon, one such new share to be offered to the shareholders in lieu of every share now held by them.

##### WEST CHIVERTON MINE.

A general meeting of shareholders was held at the offices of the company, Queen Victoria-street, on Tuesday.

Mr. WEST proposed that Mr. Granville Sharp do take the chair. Mr. LOVELAND seconded the proposition.—A SHAREHOLDER objected to Mr. Sharp occupying the chair, and moved that Mr. Heap preside.—To this Mr. SHARP, who would gladly be relieved from presiding, protested, as a shareholder, against Mr. Heap, who had sent a misleading letter to the *Mining Journal*, as a member of the committee, and had done so unknown to his brother committeemen. Eventually Mr. LOVELAND occupied the chair.

Mr. GRANVILLE SHARP (the secretary) read the notice convening the meeting, and the minutes of the previous meeting, which were confirmed.

A SHAREHOLDER asked how many men were employed on the mine, and at what wages?—The SECRETARY said he would be very happy for any shareholder to look through the cost-sheets, which were in the office, which would give every particular.

The SHAREHOLDER asked how many tons of coal had been burnt in the 20 weeks, and what price had been paid for them?—The SECRETARY handed in the coal bills, and stated that the total amount of coal consumed was 712 tons, at 13s. 9d. per ton.—Capt. SOUTHEY added that since the accounts were made up the price of coal had gone up 6d. per ton.

The SECRETARY then read the accounts, which showed a balance of liabilities over assets amounting to 1316s. 19s. 11d. With regard to the arrears of call, amounting to 1105s. 4s. 8d., about 810s. of the amount must be considered bad; a part of it had been outstanding for three or four years. The reason why the accounts were made out in a different way this time was that at the previous meeting some of the shareholders complained that they could not understand the accounts as they were then rendered.

Mr. H. W. SHARP said it appeared to him that the labour costs were rather large, amounting, as they did, to about 340s. a month. There were only three points at work underground—the 80 east, the 70 cross-cut south, and the work being done in the western part of the mine, with the view of opening out the pitches. He understood that the driving of the 80 east would cost only 30s. per month.—Capt. SOUTHEY: 40s.

Mr. H. W. SHARP did not see why the underground works should cost more than 100s. a month. When he was there in October he did not think there were more than a dozen people working at all.—Capt. SOUTHEY replied that there were fully three times that number at work at surface. He only wished that any shareholder would himself go down and see what was going on there.—Mr. H. W. SHARP added that the merchants' bills were very heavy.—A SHAREHOLDER asked what the item of 2398s. 12s. 2d. due to Messrs. Williams, Williams, and Grylls, bankers, meant?—The SECRETARY replied that the money had been borrowed for the use of the mine.

Capt. STEWART asked upon whose authority the application for proxies had been sent out?—The SECRETARY replied that he was responsible for that, although they were sent out unknown to him while he was in Cornwall. When his clerk saw the letter which Mr. Heap sent to the *Mining Journal* without first conferring with his fellow committeemen, he had the common sense to apply on Mr. West's behalf for proxies. If Capt. Stewart would read the proxy paper he would find Mr. West's name first, failing whom Granville Sharp.

Capt. STEWART thought a vote of censure should be passed on Mr. Sharp. (Laughter.)—The CHAIRMAN proposed that the accounts should be allowed and passed.—Mr. WEST seconded the proposition.

A SHAREHOLDER opposed the passing of the accounts, and moved that another meeting should be held at which further particulars should be given, and that two additional members should be appointed to the committee, who should present a new balance-sheet.—Mr. HEAP seconded the amendment so far as the adjournment was concerned.

The accounts were ultimately passed with two dissentients.

Capt. SOUTHEY then read his report, which was as follows:—

March 5.—The following is my report of this mine, and the amount of work accomplished since the last general meeting.—Underground operations: The 80 fm. level has been driven east 21 fms. 4 ft. 9 in., the lode throughout the drive varying in width from 2 ft. to 4 ft., present and producing occasional stones of lead with a kindly appearance for an early improvement, and driving by 6 men at 6d. 10s. per fathom. A few fathoms to the west of the end we have a slope working by four men on the north part of the lode, from which we are breaking some very good blende with a little lead. In the 70 cross-cut south of Hawke's shaft, we have driven 11 fms. 4 fms. 9 in. During the past few days a very great change has taken place in the character of the ground, large masses of quartz have been met with containing spots of mende and copper, with a much greater influx of water than heretofore, which would naturally lead one to suppose that the lode is near at hand, and is driving by four men at 10s. per fathom. At Batters' the shaftmen are engaged clearing the 80 west of shaft in order to effect a communication with Glubb's. When this is completed we shall have good ventilation for opening the levels eastwards, when good tribute ground will be laid open; we have one pair of tributaries already at work in this part of the mine who are earning good wages.—Surface operations: At the higher crusher several repairs are being gone into—a new raft wheel complete, new condensing work for the engine, and new sieves throughout for the jiggers; this machine, which is the principal one on the mine for dressing the blende cheaply, is now in first-class working order; we have also new condensing work brought in for the mine for Hawke's crusher, which is very much needed, and will be fixed forthwith. During the past four months we have sold 60 tons of lead, and raised about 350 tons of blende, out of which about 200 tons is delivered, and the re-



mainder is on the mine and at the wharf. None of the engines or boilers have yet been sold, but several enquiries are being made about two of them. In conclusion, the change in the ground in the 70 cross-cut seems to indicate the presence of a lode close at hand, and should this be cut in the ensuing four months, the aspects of the mine will be greatly altered thereby.—**RICHARD SOUTHEY.**

**Mr. H. W. SHARP** then questioned **Capt. Southey** at length upon the matter of the halvans. In reply, **Capt. Southey** stated that at the date of the last meeting their balance was £25,000, but it was now £17,000, and he was now selling at 11s. 6d. only; and, of course, he could not make a profit of 15s. 6d. per ton at that price. He could not tell the average depth of the halvans, which covered about 3 acres of the set. In places they were 3 ft. deep, and in other places 24 ft. deep. He could only say how many tons of halvans he could dress in the year by making a careful estimate. Nobody could work the halvans quicker than they were at West Chiverton, but they had better let the blende be where it is than sell it at a loss.

In answer to another shareholder, **Capt. Southey** said they had 150 tons of blende ready dressed now lying at Garra Wharf, and that the slimes could not at present be sold at all.

On the motion of the **CHAIRMAN**, seconded by **Mr. WEST**, the report was adopted.

The **SECRETARY** said they had two heavy bills coming due, one of which matured very soon, and their overdraft at the bankers was already £382. In excess of the amount which the shareholders empowered the committee to overdraw, and this the committee were responsible for. The bankers did not mind accommodating the company, provided that there was a resolution inserted in the cost-book increasing the power of the committee in this respect.

The **CHAIRMAN** moved a resolution temporarily increasing the limit of the overdraft from £2000 to £3000, and in the event of the limit being reached the borrowing powers of the company should not be increased until the whole body of shareholders should have been consulted.—**Capt. STEWART** seconded the amendment, which was lost, and the original resolution was carried.

**Capt. STEWART** said that as the amendment had been lost he wished to give notice that he intended to instruct his solicitors to take steps to get the company wound-up.

The **CHAIRMAN** proposed a call of 10s. per share, payable in two equal instalments.—**Capt. Southey** seconded the proposition, remarking that he held 100 shares; and **Mr. WEST**, who supported it, said he held 310 shares.

**Mr. HEAP** strongly objected to any further calls being made, and he thought they had better wind-up than go on making calls. He moved an amendment to that effect, and that, in addition, the meeting should be adjourned for 15 days.

**Capt. STEWART** seconded the amendment.

**Mr. GRANVILLE SHARP**, on **Mr. HEAP** referring to what took place two years ago, reminded **Mr. HEAP** that he had been a shareholder but one year, and that he held but a paltry five shares eight months since.

In the course of some further discussion on the subject of a call, some shareholders being willing for 5s. and others for 10s., **Capt. Southey** proposed, as an amendment, that the call should be 7s. 6d. per share, payable 5s. at once and the balance on or before May 8, thus giving two months to pay it.

**Mr. WEST** seconded the proposition.

**Capt. Southey's** proposition being put to the meeting was carried by 1016 votes, against 391 votes for **Mr. HEAP's** amendment.—The meeting then closed with a vote of thanks to the **CHAIRMAN**.

#### EAST CHIVERTON MINE.

A meeting of adventurers was held at the offices, Queen Victoria-street, on Tuesday.—**Mr. GRANVILLE SHARP** in the chair.

The statement of accounts for the 20 weeks ending Dec. 25 last showed that the labour cost and sundries during that period amounted to £167, the merchants' bills £166, bankers' commission and interest for the half-year ended Dec. 31, 167. 3s. 7d., and balance from last account of £237. 2s. 9d.; on the other side the call of 4s. 6d. per share (less discount) was £534. 12s. 10d., leaving a balance against the mine of £667. 7s. 11d. The liabilities at the date of the accounts were—merchants' bills £457. 3s. 9d., Williams, Williams, and Grylls, bankers, £890. 2s. 2d., income tax, 4s. 4d., rent account, 31s. 4s. The assets were—arrear of call, £538. 10s. 3d.; labour cost paid, but not debited, £177. 9s. 3d.; Devon and Cornwall Banking Company, 9s. 10s. 10d.; lead account, 48s. 13s. 11d.; cash in hand, 14s. 18s. 1d., showing a balance against the shareholders, as stated above, of £667. 7s. 11d.

The **CHAIRMAN**, in reply to a **SHAREHOLDER**, said that about £600 out of the arrear of calls was doubtful. He moved that the accounts be received and passed, and entered on the minutes.—**Mr. WALTERS** seconded the resolution, which was put and carried.

**Capt. Southey** then read his report, as follows:—

**March 5.**—Since the last general meeting of the shareholders the following progress has been made towards the development of this property. The rise and fall in my last report has been communicated with the 74, which has thoroughly ventilated the bottom part of the mine. We had driven out a very short distance west in the 90, before we intersected a good lode, which is now worth from 2 to 3 tons of silver-lead per fathom, or in other words, 30s. per fathom. This has surpassed anything we have yet seen in the mine for richness, and judging from present appearance of the lode and the settled state of the ground which it is now in, there can be little or no doubt but that we have entered on a continuous run of ore ground, similar in character to the adjoining mine. In the 74 we have commenced to sink a winze about 8 fms. in advance of the 90 cut, the lode has a splendid appearance, and is worth at the present time 1 ton of silver-lead per fathom; this speaks well for the future, and I have no doubt as the sink is being put down the lode will improve in value, and become equally as rich as the 90 and is, going west. We have met with a side branch in the 64, about 60 fms. west of the shaft, producing from 10 to 15 cwt. of lead per fathom, this was intersected in coming up with a stope from the 74. We are still pushing forward the drive of the 64 cross-cut south of the engine-shaft. Since the last meeting the ground got harder, but not to the extent it was formerly, and I have reason to hope this is only temporary. End driving at 10f. per fathom. We have passed through a large branch in this cross-cut, 1 foot wide, containing a good deal of muddle, plainly showing the ground is highly mineralized. The mine of late has been inspected for some of our large shareholders by independent and highly competent agents of the county, all of whom fully believe with myself, seeing the lode has got down into settled ground, that this improvement will be lasting and remunerative to the shareholders. The dressing hands are engaged dressing the silver-lead that is now being raised from the end and winze, and it affords me a very great pleasure to be in a position to state it is turning out quite equal to the computation and judgment explained in the different reports of those who have recently inspected this property, and when the winze in the bottom of the 74 is communicated with the 90 a profitable section of ground will be available for testing. In conclusion, I beg to say the discovery alluded to must be highly satisfactory to all those who have for such a long period held to their shares, especially when we look at the fact that this improvement took place just at the point predicted in my former reports. Fully believing the corner is turned, and that we are now entering on a career of prosperity.—**RICHARD SOUTHEY.**

A **SHAREHOLDER**: How far have we driven in the ore ground at the 90?—**Capt. Southey** said about 4½ fms., and it was important that they would not require to timber it; it was very similar in character to West Chiverton. He did not mean to say they could work it cheaper because no timber was required, as they would have to use dynamite and powder. Still it proved that they were in settled ground, and he believed they were in a continuous run of ore ground.

A **SHAREHOLDER** asked whether they had any stock of lead on hand?—**Capt. Southey** said about 10 tons clean and 2 or 3 tons coming on. He might mention that operations last summer were somewhat obstructed by having to stop the engine to put in new pitwork (larger pumps, in order to compete with an increase of water.) The present engine would take them down 100 fms. deeper. They could not have competed with the water had it not been for the larger pitwork.

**Capt. Southey**, in reply to a question, said that if the 90 continued as now it would soon be in a paying position at present prices for lead.

On the motion of the **CHAIRMAN**, seconded by **Mr. WALKER**, the agent's report was adopted and ordered to be printed and circulated.

A call of 5s. per share was then made, and the meeting broke up, with a very cordial vote of thanks to the **CHAIRMAN**.

#### MWYNDY IRON ORE COMPANY.

The nineteenth annual general meeting of shareholders was held at the offices, Lothbury, on Wednesday.

**Mr. JOSEPH FRY** in the chair.

**Mr. ALEXANDER THOMSON** (the secretary) read the notice calling the meeting.

The **CHAIRMAN** said he was sorry to see such a small gathering. He had also to apologise for such a small attendance of the board. **Mr. Brogden** was in New Zealand; **Capt. Pelly** had been at the office that morning, but had been called away to an important meeting; and **Mr. John Taylor** was unable to be present owing to indisposition. The directors would have been glad to have met the shareholders with a handsome dividend, also under more favourable circumstances, but they had been the victims of circumstances over which they had no control. The state of the iron market had been very unsatisfactory. The price of iron which at the time of the last meeting was 62s., was now only 53s., therefore they had had to face that difficulty during the whole of the year. There had been a considerable increase in the costs, which was caused by two reasons. In the year 1879 the things were so very bad that they could not do much in the way of pitwork, and, therefore, during the past year they were forced to do more work. There was another circumstance. In the spring of the year there was a great fall in iron, and general depression, and it was thought that as the autumn advanced they would see a considerable improvement, and it was thought desirable to increase the raisings, to meet what they believed and trusted would be a very active demand. But the demand did not come, and the stock of ore was increased by 10,000 tons, so that the money which had been expended over and above what they had sold, was laid out in a stock of ore, which he hoped they would sell. He was happy to say that during the last two or three months the deliveries had increased and were now increasing. There was no improvement, unfortunately in price, and the large stocks of Spanish ores were only now beginning to be worked off. They had upwards of 15,000 tons of ore now. There had been another cause of expense, namely, the erection of an expensive machine, in the shape of a compressor engine drills, which was expensive at first, but would in the end effect a great saving of labour and expense. All this had been a charge on revenue; there was something like 1000 tons. With respect to material at the end of the year 1879, they had some heavy crushes in the levels, and they had some difficulty to clear them. The demand for timber was very much increased, and added very much to the expenses.

A **SHAREHOLDER** asked whether it was necessary to raise more ore there was plenty of ground. He presumed there was no necessity for a call?—The **CHAIRMAN** said there was plenty of ground. There was no necessity whatever for a call. They were rather poor, but they had made a profit on the past year of a little over 4000s., of which 2000s. had been carried to a reserve fund for the repayment of the outstanding debentures, and 2000s. was divided in dividend. They had made nearly as much profit as last year.

A **SHAREHOLDER** asked whether the 4000s. temporary loan had been borrowed against the stock of ore?—The **CHAIRMAN**: Yes; we have done it upon our own responsibility.

A **SHAREHOLDER**: Have we reduced our stock since the stock was made up?—**Mr. ROBERT FLETCHER** (a director): We are just beginning now.

**Mr. R. FLETCHER** said that when they met last year iron was just at its highest price, but it had since steadily gone down. The fall in the price was not the only thing, but there was a great diminution in the production of iron. He trusted, however, that this year they would have considerably improved deliveries, but at present there was no improvement in price. If they could see their way to increase the production, that meant a diminished cost per ton, as the standing expenses remained the same whatever the production.

In reply to **Mr. HOWSE**, the **CHAIRMAN** said that this company was not singular in not paying dividends in 1877 and 1878.

A **SHAREHOLDER**: If we get a good state of trade again shall we get 4s. and 5s. dividends as we used to do?—The **CHAIRMAN**: Certainly. If we could sell all we could we should make a large profit.

After some further discussion of an unimportant character, the **CHAIRMAN** moved the adoption of the report and accounts, which was seconded by **Mr. FLETCHER**, and carried.

On the motion of **Mr. FLETCHER**, seconded by **Mr. CHARLES REYNOLDS**, a dividend of 1s. per share was declared.

The retiring directors, **Mr. J. Fry** and **Mr. John Taylor**, were re-elected.

The retiring auditor, **Mr. E. E. Scott**, was re-appointed.

A vote of thanks to the **CHAIRMAN** and directors closed the proceedings.

#### DOLCOATH MINING COMPANY.

The general meeting of shareholders was held at the mine on Monday, Rev. W. W. BUTLIN in the chair.

The usual preliminaries having been disposed of, the report of the agents—**Capt. Josiah Thomas**, **James Johns**, **Jos. Chynoweth**, and **James Rodda**—was submitted, together with the statement of accounts, showing a profit on the three months' working of 4510s. 4s. 9d., increasing the available balance to 7338s. 13s. Out of this it was resolved to declare a dividend of 4296s. (17. per share); to pay income tax, 871s. 16s. 10d.; poor and way rates, 400s.; leaving 1770s. 16s. 2d. to carry forward.

The **CHAIRMAN** thought it was wonderful to know that they had been able to raise 371 tons of tin in the past three months, considering the severe weather they had had. When they considered having made a skip-road 320 fms. long, which was a matter of importance to a mine, and which took about 150 men labour was to complete, he thought it was marvellous that they had raised such a large quantity of tin, and paid a dividend of 17. per share. The stocks of tin had decreased 413 tons in February; there had been a decrease of 650 tons in the same time in America, making a total decrease to the end of February of 1063 tons. There were also 4597 tons of tin less this February than in the same month in last year. All things considered, he thought the progress they were making would be of considerable value to them in the future. They had every reason to be thankful for the great improvements being made. The mine seemed to continue quite as valuable as ever, and he hoped it would long continue as prosperous as at the present time.

**Capt. Josiah Thomas** remarked that nearly every place mentioned in the report of producing tin, and was valued. The richest part for some time past had been the bottom of the mine near the engine-shaft. The lode in this part was quite as good as it had been, and, in fact, the last sample was a little better—140s. per fathom—but as it was only one sample they put down the valuation at 120s. per fathom, the same as before. During the past few months, owing to the rain and snow, they had had a lot of water in the mine, and consequently they had not been able to do very much work below the bottom level—in fact, they had only sunk the shaft about 4 ft. One of the winzes they had not been able to sink at all, and the other one only very slightly. The water now, however, was falling back, and they hoped shortly to be able to resume the sinking of the shaft. When they sunk 3 ft. deeper below the 352 they would commence to drive east and west to communicate that level with those two winzes, and lay open a very large and valuable piece of ground. The Stray Park shaft they had begun to sink again below the 290; the lode in that part was large and promising, and they thought there was every reason to hope for an improvement as they sunk deeper. The stocked tin account, as they were aware, was in a great measure met, although not entirely. There was an account giving an exact statement of it, which they would publish, showing exactly how the stocked tin had stood. They entered into a sort of speculation, he supposed it might be called, at the time, but they did not sell the tin at the lowest price, but as it was they had made considerable loss on it. In 1874 they stocked 210 tons (estimated at that time) at 59s. a ton, valued at 12,390s., and the interest on that at 5 per cent. for 5½ years was 3097s., making a total of 15,487s. In 1880 they sold this tin, which weighed 249 tons 15 cwt. (not 210 tons, as previously estimated), and which realised 13,998s. 2s. 9d., leaving a loss on the amount of 1488s. 17s. 3d. He hoped they would never enter into any tin speculation again. After paying everybody they had now got in the banker's hands a balance of 8000s. There was one good thing that had happened to them within the past few days, which was that the dynamite patent had been at an end in about two months. If the price of dynamite were reduced from 2s. to 1s. per pound they would effect a saving on their present consumption of at least 1000s. a year, and some tens of thousands of pounds a year to the mines in Cornwall.

**Mr. A. LAYTON**, in proposing a vote of thanks to the **CHAIRMAN**, remarked that the report of the mine was gratifying in every respect. The future of the mine he supposed was never more encouraging than that day. Their manager had told him that they had plenty of stamping power, and what was also equally and perhaps more encouraging was that they had not only plenty of stamping power, but that they had plenty of reserves in the mine to keep that power fully employed in the case of the shareholders.

The **CHAIRMAN** having suitably acknowledged the compliment, the proceedings terminated.

#### GUNNISLAKE (CLITTERS) MINING COMPANY.

The four-weekly meeting of shareholders was held on the mine on Thursday.—**Mr. J. C. ISAAC** presiding. There was a large attendance of shareholders. The accounts, which included five months' costs and four months' labour, showed a balance in favour of the mine of 799s. 6s., the profit on the four months' working being 565s. 6s. 8d.

The **CHAIRMAN** said, as a large shareholder in the mine, he was rather disappointed that the profit was not larger. It was anticipated at the last meeting that more ore would have been sold, and that the costs would have been diminished, but the agents would explain why that had not been the case.

**Mr. SHARPE** thought it was very desirable that the accounts should be printed and circulated previous to the meeting, so that the shareholders might have an opportunity of looking into them. Everyone acquainted with the mine knew it was a mine of great development, if properly worked, and, therefore, it was very disappointing to have the statement made out as it was, because the shareholders were not prepared to enter into any argument based on the figures. He suggested that in future the report and accounts should be printed previous to the meeting, and that the accounts should have the certificate of the auditors attached, as was customary in most other mines.

The **CHAIRMAN** said the accounts bore the signatures of the auditors, and **Mr. W. Mathews**, one of the auditors, said there was no reason why the usual form of certificate should be attached, although it was not customary with many mines in which he was connected.

The **CHAIRMAN** said they might congratulate themselves on the fact that their new machinery had increased the value of their ore. It was true that they sent less tonnage for sale, but they realised better prices. On looking over the ticketing prices it would be seen that the ore of that mine was the best in the market. At the last sale it averaged more than 6s. per ton, whereas they only used to realise between 4s. and 5s.

**Capt. SKEWIS** said that although there was a less quantity of ore raised on account of the improved dressing, the value was quite made up by the saving effected on the original mode of dressing, which resulted in much waste. **Mr. SHARPE** said he wished it to be understood that it was not his wish that the mine should be upset, as was the case on the last occasion, because he thought such disturbances were prejudicial to the interests of the mine. But he was told at the last meeting that he had borrowed his shares to come there, which was of course very irritating. He was now a considerable shareholder, and he thoroughly believed in the mine, and he was anxious to see the mine put in a better position. At the last meeting he raised a question about the committee auditing their own accounts. He then stated that it appeared to him to be objectionable that one of the committee should for practical purposes order goods, supply goods, and audit the accounts. He wished to know whether the same practice was to be continued?

**Mr. MONK** inquired why the banker's charge, had been doubled each time on the last three occasions? This time the amount was 51s. 7s. 5d.; last time it was 24s. 13s. 4d.; and the time before it was 13s. 10s. 11d. Could the committee explain the reason?

The **CHAIRMAN** explained that the larger amount of business done, ore sold, and costs, involved a greater credit at the bank.

**Capt. SKEWIS**, in reply to a shareholder, said very rich discoveries would doubtless be made in the 188 fms. level of the Bonny lode. The cross-cut in the 178 fms. level would be driven in about six weeks, and in Carg's south lode there were muddle, quartz, and other rich mineral.

**Mr. SHARPE** said they had been told that ore from that mine was the richest in the district, and that there were large reserves. He wished to know, therefore, why the mine did not pay better. It was all very well to have a good description of the indications; but he was afraid he was tainted, like the Yankee, with a fondness for the almighty dollar. (Laughter.) As there were undoubtedly large reserves in the mine, he thought it was a matter for discussion at a large meeting like the present as to how those reserves could be brought into the market. They did not want to leave a lode in the hands of a few people, but they wanted to see the mine as a whole. One could not shut his eyes to the fact that the company was on the unlimited liability system, and it was a question whether they would not be better to make it a limited liability company.

**Capt. SKEWIS** replied that the Old Bedford and South Devon shares had risen in consequence of market operations, and not through the returns.

**Mr. SHARPE**: And why not this mine?—**Capt. SKEWIS** said not more than 15 or 18 months ago shares could be bought at 10s. each, and now they were 5s.

and 6s. It was a question whether the shares of any mine had risen by such a percentage in so brief a period. The executive had not come to the shareholders for money to work the mine during the very great depression in the price of copper, but the mine had been brought to its present position in consequence of what had been returned from underground by careful and judicious working. The committee agreed to erect a new engine and machinery, and this was done out of the capital which had accumulated by the careful working without coming to the shareholders for money. The shaft was being retimbered. This work had been extended to the 188, and consequently they had not been able to work the winze more than 10 or 12 hours a day while this work was progressing. In about six weeks it would be accomplished to the bottom of the shaft, and then the winze could be worked for the 24 hours, and if it could be shown that more stuff could be drawn than the present jiggling machinery was equal to the shareholders would be asked to provide more drawing power. They could send much larger quantities of ore to the surface, where they had the continual use of their winze.

**Mr. NICHOLLS** thought the fact that **Mr. Sharpe** had bought a large number of shares proved that he had faith in the mine. He believed capital results would accrue, and it was better that they should be gradual and continuous than fluctuating and uncertain. (Applause.)

The **CHAIRMAN** said it was the only copper mine in Devon or Cornwall which was paying costs and dividends, and the agents deserved much credit for the manner in which they had worked it.

It was decided to make a dividend of 1s. per share.

**Mr. HURSWILL** was appointed auditor, at a stipend of 8s. per annum.

**Mr. J. PEARCE** proposed that the members of the committee should be appointed one by one; but it was resolved, on the motion of **Dr. KEMPTHORNE**, seconded by **Mr. HOOD**, that the old committee should be elected *en bloc*—**Messrs. Isaac, W. Mathews, Greenfield, Daw, Knight, and Nicolls.**

It was also resolved "That this meeting enters its protest against any alteration in the public ticketing and sampling, without due notice being first given to all the owners."

The agent's report was of a very satisfactory character, and **Capt. SKEWIS** announced that during the meeting a valuable discovery had been made.

#### WHEEL CREBOR MINING COMPANY.

An ordinary general meeting of the adventurers was held yesterday, at the offices, Gracechurch-street Buildings,

**Mr. J. Y. WATSON, F.G.S.**, in the chair.

**Mr. C. B. PARRY** (the secretary) having read the notice convening the meeting and the minutes of the previous one,

The **CHAIRMAN** said: The accounts to be presented to you to-day show ore sales since last meeting 3854s. 19s. 6d., and a profit of 1429s. 13s. 3d.; assets over liabilities, 2180s. 12s. 10d. At the last meeting a dividend of 1s. 6d. per share, equal to 80s., was paid out of a profit of 379s. This time it is proposed to pay 2s. 6d. per share, or 150s., but as the ore bills have not yet been received it will be made payable on March 31. I think, gentlemen, when you consider that the frost and the snow put us altogether out of gear for a fortnight or three weeks it speaks well for the mine that we have kept up to our estimate of last meeting, and have not even deferred the present. You will find also by the accounts that we have spent since the last meeting 298s. 3s. 8d. on the new shaft, which is now nearly complete to the 108. The agent writes that the mine never looked better, and that he expects to raise at least 1000 tons of ore for the coming four months. I rather expected **Capt. Rowe** would be here, but he has sent an elaborate report.

We beg leave to hand you our report of this mine for the general meeting to be held on the 11th inst., showing the cheering prospects before the shareholders in the present and future development of the mine, which is as follows:—During the past four months our principal speculative operations have been partly confined to sinking the new engine-shaft below the 72, to meet and communicate with the rise crossing up from the 108 below. This important work is pretty nearly accomplished, being so near that we are expecting to make the communication within a few feet further sinking and rising, provided the dialling is correct, where we shall be in a position to decide on the course to be adopted to make the shaft complete to the 120, and continue its course below in the bottom of the mine. A rise is being put up on the south part of the lode from the 120 to communicate with the winze sunk below the 108, which we calculate will be thoroughly ventilated in a short time, which will facilitate our operations in stopping away the rich ore ground between both levels with increased economy.

The 108, east of the new shaft, has been extended 7 fms. 1 ft., where the lode has improved in size to 6 ft. wide, yielding arsenical muddle, with good stones of ore showing a very kindly appearance. The Corpus level, east of the new shaft, has been driven 3 fms. 6 ft. in a very kindly lode, producing rich silver-lead and copper, in places worth 20s. per fathom. The 48 has been extended 9 fms., where the lode has also improved in size and character, and showing a kindly appearance. Our available stopping ground throughout the mine is looking exceedingly cheering. The lode in the Nos. 1 and 2 stopes, in the back of the 120, is worth 30s. and 35s. per fathom respectively. The lode in the winze going down below the 108 is worth 30s. per fathom. The lode in the No. 1 stope in the back of the 108 is worth 40s. per fathom. The No. 2 stope in the highest point near the rise is worth 60s. per fathom. The No. 3 stope going east is worth 80s. per fathom. The lode in the No. 4 stopes is worth 40s. per fathom. We have never seen the mine looking better, and calculate on sampling over 1000 tons of good quality copper ore, with the usual quantity of muddle (about 150 tons) in the coming four months, at the same time continue and increase all needful speculative points in the new ground in quest of more important discoveries of ore, not losing sight of the lode going down in the bottom of the mine below the 120, where the new shaft will be sinking at no distant period, opening up new ore ground worth from 40s. to 100s. per fathom.

An **ADVENTURER** asked whether they could not spring another 6d. dividend, as it would still leave 380s. in hand?—The **CHAIRMAN** replied that the ore bills would not be in till the end of the month, and they must keep a month's costs in hand.

**Mr. ROSEWARNE** referred to the importance of the new shaft, which he said would soon be completed, and would open ore of the estimated value of 80,000s. When the new shaft was completed they would be able to sample 1000 tons in two months as easily as they could now 500 tons.

**Mr. PARRY** added that no doubt the mine was in a better position now than it had ever been in.

The **CHAIRMAN**: And we have a better report than we have ever had.

A dividend of 2s. 6d. per share was then declared, payable on and after the 31st inst.

On the motion of **Mr. CLIFFE**, seconded by **Mr. ROSEWARNE**, a vote of thanks was passed to **Capt. Rowe** for his able management of the mine.

The **CHAIRMAN**, in reply to a question, said that they considered their ore sold at a very fair price according to the assay. They were seldom 50s. out.

A vote of thanks to the **CHAIRMAN** and committee closed the proceedings.

#### WEST CARADON MINING COMPANY.

A three monthly general meeting of the adventurers of the above mine was held at the offices of the company, Gracechurch-street, on Wednesday, to pass the accounts, to make a call, and for the transaction of any other business.

The chair was occupied by **Mr. H. L. PHILLIPS**.

**Mr. J. WATSON** (the secretary) read the notice calling the meeting. The statement of accounts showing a balance of assets over liabilities of 186s., was presented, and examined and passed.

The report of **Capt. Richards**, the agent, was then read:—

**March 1:** In handing you my report for the general meeting to be held on March 2, I beg to say that the mine at all points of operation, is looking very well. The winze sunk below the 27 in Gilpin's lode is down about the required depth for the 38, and will yield about 1 ton of good ore per fathom. This, in all probability, is the same lode that has been worked so extensively a little to the east of this level, and which produced large quantities of rich copper ore. This lode was missed at the 38, and has never been seen so far west as our present workings in the 27, and in order to reach it we shall have to drive about 3 fms. west, on what is now a small branch, and then, if necessary, cross-cut a few feet, after which we shall commence driving west, and in all probability will open up a long run of profitable ground; but before this can be done room must be provided so as to clear the levels, which are now full of debris. This lode in the back of the 17, although poor when we commenced rising, will now yield about 1½ ton of rich ore per fathom. The same lode, in the back of the adit, is suspended until the ore is removed from below. Vivian's north lode, in the back of the 50, will produce about 1½ ton of copper ore per fathom. The stope in the back of the 38 on this lode, west of cross-cut, will yield 2 tons of ore per fathom. The stope in the back of the same level east of cross-cut will also yield 2 tons of ore per fathom. The same lode in this level driving east of cross-cut will yield 2 tons of copper ore per fathom. We shall have soon driven far enough here to ascertain if this is the same lode branching off some distance to the east of our present workings, or whether it is still standing north. There are other places deserving a spirited trial, some of which we have been obliged to suspend for the present owing to the levels being left full of attle, and the roadways in a bad state; this we shall attend to at once, and put in proper working order. I need scarcely call your attention to the large amount of work done, both underground and at surface, since we commenced operations 12 months ago. I may, however, say that we have erected a 45-horse power rotary engine, fixed crusher, &c. Two shaft tacks also put in, and repaired skip road in two shafts, one about 70 and the other 80 fms. from surface; cleared a long run of levels underground, and laid down at surface tramways for the conveyance of ore from one part of the mine to another, the greater part of which work has been accomplished since the last general meeting. We have about 100 tons of ore broken altogether, 50 to 60 tons of which we have drawn to surface, but owing to the severity of the weather we have been unable to prepare a parcel for the



NEWCASTLE-ON-TYNE STOCK EXCHANGE.—Messrs. SPENCE and INWIN, stock and share brokers, Grey-street (March 10), write:—“Quietness has again characterised our market this week, but the improvement in the weather, the cheapness of money, and the general confidence in improving trade will, we hope, shortly bring about a better state of affairs. Be le Metal and Chemical shares remain at par to  $\frac{1}{2}$  p. Bolckow, Vaughan, and Co.'s shares are a shade better this week, the 20s. p. 100.



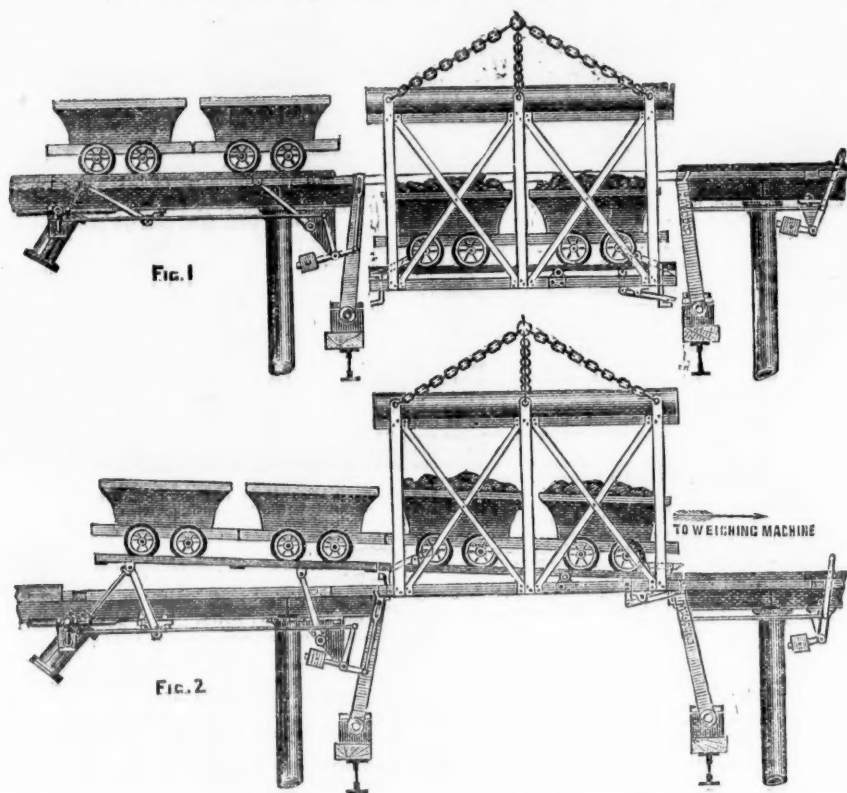








## FISHER'S PATENT SELF-ACTING ARRANGEMENT FOR UNLOADING AND LOADING MINE AND COLLIERY CAGES.



### FISHER'S PATENT SELF-ACTING ARRANGEMENT FOR UNLOADING AND LOADING MINE AND COLLIERY CAGES.

The above illustration represents a simple and effective mine and colliery "banking" or tram-changing arrangement which, by a very simple alteration and addition to ordinary mining and colliery cages and loading platforms enables the unloading of the full trams from the cages and the simultaneous loading of the empty ones thereon to be effected automatically with little or no manual labour except that to place the empty trams into position on the loading platform. The manner in which this is effected is shown in the above illustration, where Fig. 1. shows the position of the whole while the cage is being raised from the shaft, and Fig. II. the position when the change or "banking" of the trams is taking place, and the action of the apparatus is briefly as follows:—Instead of fastening the cage rails to the cage itself they are swung intermediately between the ends on axles working in bearings attached to the cage, and are fitted at one end with "L" pieces, and at the other end with deflecting levers, arranged to project below the bottom of the cage in such a manner that when the cage settles on the props they incline or tilt the rails of the cage to such an extent that when the cage has settled on the props the loaded trams run off the cage to the weighing machine or elsewhere by nature of their own gravity alone, the tilting of the rails having previously deflected the front stops on the cage which held the trams in place. Simultaneously with this motion the loading platform and rails, which are attached to four carrying levers, two at each end, working in bearings fixed underneath the rails, which carries the empty trams, are automatically raised by a small single-acting cylinder (actuated either by compressed air or steam) to a similar inclination to, and in a line with, rails on the cage; this action propels the trams down the incline on to the cage, where they are arrested at the proper place by the front axle of the first loaded tram striking a lever shown at the right hand of the illustration, which releases the front stops on the cage. The operation of loading being completed, the cage is raised off the props, and in so doing the cage rails fall to their normal horizontal position, and at the same time the lever controlling the supply and discharge of steam to and from the platform cylinder allows the steam to be exhausted from the under side of the piston, and the platform carried by it is lowered to the level of the mine or pit bank ready to receive other empty trams. At the bottom of the shaft the empty trams are pushed off the cage by the loaded ones running on to it from a permanent incline, the lowering and raising the cage stops being automatically effected by the cage and trams alone.

This system of "banking" trams is equally applicable to cages with two, three, or four decks, and holding one or more trams on each deck; and by the application of this invention and a self-raising and lowering tram-hoist to lower the loaded trams to the mine or pit bank, and raise the empty ones therefrom to the loading platform, the unloading and loading of each deck simultaneously is effected without the tedious necessity of lowering each deck consecutively to one or two platforms. The extreme simplicity of the whole arrangement, which is entirely self-acting, dispenses with the attendance of any skilled attendant whatever, and even with the excessive wear and tear that mining and colliery machinery has to sustain it is practically impossible that any derangement whatever can occur to it. It is understood that the apparatus has now been in constant use at the Clifton Collieries, near Nottingham, for upwards of three years, and has been recently adopted at the Cymmer Colliery, near Pontypridd, South Wales, where the shifting of the heavy trams used in South Wales entails much labour, and that by its adoption at Clifton Colliery an immense amount of labour at the pit bank has been dispensed with, and the output, or amount of coal raised in a given time, has been increased 25 per cent. owing to the great saving in time of changing trams. These are important facts; and, as economy in expense and labour of raising minerals and coal is of vital importance to mine owners and colliery proprietors, it is anticipated that this apparatus will be very extensively adopted. It is being manufactured and introduced by Messrs. Warsop and Hill, of Nottingham.

**DR. SIEMENS' GAS AND COKE FIRE.**—At the Royal Dublin Society recently Mr. Moss made a communication on Dr. Siemens' new gas and coke fire. The author pointed out the objections to the common plan of heating rooms by means of coal in an open grate. This system is perhaps the least economical that could be employed, as a very large portion of the fuel is distilled up the flue unconsumed. It has also the objection of most seriously vitiating the atmosphere of our cities. Already the vitiation of the atmosphere of London has become a most serious difficulty. Dr. Siemens' proposal is to burn coke with the aid of gas; thus the smoke difficulty is at once overcome. He substitutes for the bars at the bottom of the ordinary grate a plate of iron attached to a copper plate at the back. To the copper plate is attached an arrangement for conveying heated air to the front of the grate, where it impinges upon a row of gas jets. This arrangement is highly efficacious, and has the effect of withdrawing useless heat from the back of the grate and making the front correspondingly hot. The author found that with a moderate expenditure of gas an excellent smokeless fire is maintained at a cost slightly exceeding that of the common coal fire, but if much gas be consumed the fire becomes costly. He pointed out that the true solution of the problem of domestic heating is in the direction in-

dicted by Dr. Siemens, but that we must obtain gas specially manufactured for heating purposes. Such gas could be produced and supplied to the public at a cost much less than that of illuminating gas. A company in Berlin has proposed to supply a heating gas at about 7d. per 1000 feet. With such gas and anthracites as the solid fuel, Dr. Siemens' grate would be almost perfect.

### RAISING WATER FROM MINES.

A cheap, simple, and useful elevator for mines, which it is thought may in some cases obviate the use of the forms of elevator now generally adopted, has been suggested by Mr. G. DAY, of Neath, who states that for mines steam is objectionable in any way, as it condenses and also makes the places where it is employed unbearably hot; and compressed air though useful in many ways yet nevertheless involves expensive compressing machinery, and is a more or less constant source of trouble in the mine on account of its producing such cold in the cylinders of the engine it drives that ordinary lubricants are little or no use, and glycerine has generally to be used; the moisture also is sometimes turned into ice. In general form the apparatus is somewhat like a steam injector, but the motive power is water, not steam; and while the vacuum in the steam injector is formed partly by condensation in his it is formed entirely by the velocity of the small stream of water. The elevator consists mainly in a body provided internally with two nozzles, one the discharging nozzle, a fixture, and the other through which the head water flows, either adjustable by means of a hand-wheel and screw or their equivalent, or a fixture like the first, according to the requirements of the case. One form is thus constructed—about the centre (lengthwise) of the body is a branch, through which the head or pressure water flows into one enlarged portion or chamber in the body, through which chamber in the direction of the length of the body passes the adjustable nozzle, said adjustable nozzle being hollow, and pierced with suitable holes or openings for the free passage of the water within the chamber to enter. A little further along the body is another branch and chamber forming the intake for the water which is to be removed or raised, and the adjustable nozzle fits sufficiently tight into the intervening space to stop the passage of water between it and the body, though still free to move as needed; packing can be used for this purpose if found desirable. The second chamber terminates in the discharge nozzle which is arranged in any convenient manner, but preferably in a line with the central axis of the body. The action of this elevator is that when the head water enters the first branch and chamber it passes through the spaces into the inside of the adjustable nozzle, and passes out by its orifice (which is preferably contracted) into the discharge nozzle with great velocity, thereby producing a vacuum into which the water to be removed rushes, and is driven out through the discharge nozzle with the head water. The relative areas of the nozzles may be varied to suit circumstances.

A simpler form of elevator consists of a short body provided with the two branches, chambers, and discharge nozzle as before, but instead of being adjustable by hand wheel or otherwise, the internal or supply nozzle is fixed (preferably screwed) into the body at or near the bottom of the first chamber projecting into the second chamber, as in the case of the movable one, a suitable cap closing the top of the first chamber. The action is the same as in the former case. A third form has the discharge nozzle, second branch, and chamber, and also the fixed supply nozzle as before, but instead of the first branch being upon the side of the body as in the previous cases, it is attached to the top of the body either beyond the chamber or in place of it, and the head water enters the supply nozzle direct, the supply branch being straight or curved in any convenient direction. In all cases he prefers to taper the discharge nozzle, the smaller area being at the second chamber and the large area beyond it at the end of the body. These elevators can be made of various materials and in various ways, but he prefers to cast them in iron or brass, and to screw the different parts together; in working they may be placed vertically or horizontally, or in fact in almost any position.

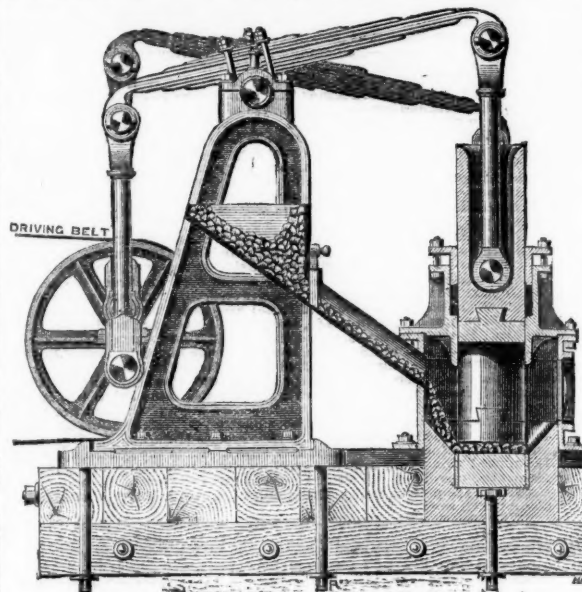
### MANUFACTURE OF IRON AND STEEL—THE FOCUS CONVERTING PROCESS.

A bath of molten pig-iron provided on the hearth of a furnace is, according to the process suggested by Mr. L. M. LINDBERG, of the Kohlsva Ironworks, Sweden, brought under the action of a current of rich gas, mixed with sufficient air for its combustion, which is caused to enter the furnace with great velocity, and in such manner that a sharply limited flame—the focus flame—is formed, which is directed against the surface of the molten iron. By its velocity the focus-flame removes the slag from the surface of the molten crude or pig-iron; and, owing to its concentrated heat and oxydising power, causes the conversion of such crude or pig-iron (under the phenomenon of boiling) to steel or malleable iron; and this may be effected without any manipulation or admixture, unless for some special reason desirable. In one form of the apparatus the furnace consists of a casing of iron plates lined with refractory material. There is an opening through which the pig-iron is put into the furnace, and samples are taken out for judging the progress of the process. The refined metal is tapped through another opening, which during the process is closed with fire-clay, or similar material. There are also two openings by which the furnace is connected with

regenerators for gas and air. A channel or passage conducts the air from each regenerator to a gas channel, into which opens another channel or passage, wherein the gas and the air are still further mixed on the way to the furnace.

The focus-lamp required for this converting method is obtained by directing the air blast with a sufficient velocity through the gas into a common mixing and conducting tube for the gas and the air, whereby the mixing becomes intimate and the combustion perfect. In carrying out the process the crude iron may be introduced in a molten state from the blast-furnace, or some remelting furnace, or it may be melted in the converting furnace itself. When the pig-iron has come to a fusible state in the furnace no other manipulation is required for converting, but by increasing or diminishing of the pressure on the gas and air, to change the nature of the flame according to whether it is to have an oxydising or a reducing action, and if generators are employed to change the valves as usual. When the samples taken out and examined show that the product has attained the desired composition and quality, the metal is cast in the usual way.

### DUNHAM'S GOLD QUARTZ STAMPER.



The above illustration refers to the subjoined description of an entirely new form of stamping machine, expressly adapted to the reduction of gold quartz, invented and patented in this country by Mr. HUMPHREY B. DUNHAM, of New York. A large size drawing of the machine was exhibited at the Society of Arts, and fully described by Mr. Alfred G. Lock, F.R.G.S., in his able lecture "On Modern Gold Mining," already referred to in the Journal, and appeared to meet with unqualified approval from practical mining men. The machine consists of a single or double laminated spring lever, pivoted out of the centre of its length, so as to form a long and short arm, the object of this arrangement being to get a reacting or elastic blow on the quartz, and to prevent the gold from being lost by foliation, &c. It has been proved that this character of blow is exactly what is required for the efficient and economical reduction of all friable materials, independently of their toughness or specific gravity. The power is applied to the short arm of the lever spring, and is communicated to the quartz in the coffer by a ram at the end of the long arm. This action can be familiarised by the Macadam road stone-breaker, who instinctively selects a long and elastic handle for his light hammer, with a view to saving his biceps and accelerating his work.

The coffer has screens on all sides of the hammer, so that the greatest area of output is secured. The average output of gold quartz or silver ores from these machines (run at 200 blows per minute), where Californian grades of 500 holes to the inch are used, is about 1/2 ton per hour, and this is brought about by an expenditure of 12 indicated horse-power. The effective blow of this stamper can be increased at will by altering the speed; and the peculiar action of the spring, by its instantaneous withdrawal of the head after having delivered the blow, fractures the quartz into grains without over-stamping or sliming. These machines are both cheap and effective, and the small sizes, particularly adapted for prospecting purposes, are manufactured in such a manner that no single piece weighs more than 1 1/2 cwt., can be carried on the backs of mules, and erected and taken down again in a few hours. A large drawing can be seen at the Mining Journal Office, fully illustrating the working of the machine, so that those desiring to introduce it may readily judge of its merits.

### NEW AMALGAMATING APPARATUS

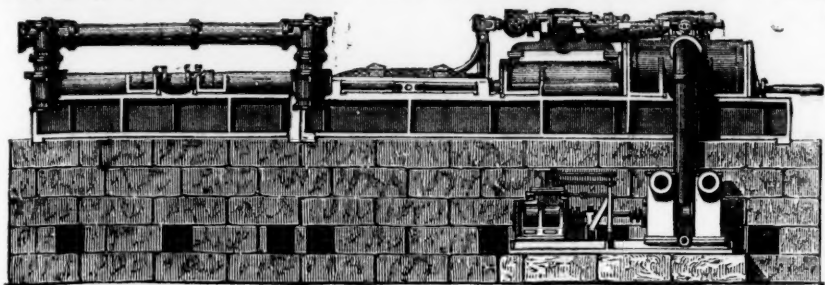
An improved amalgamating apparatus of limited dimensions, and which can be made at small cost, has been invented by Mr. PAUL DESIGNOLLE, of Paris, and will, it is claimed, allow of the treatment of comparatively large quantities of pulp in a short time. The object is to place the amalgamating plates in a small space, so that they can easily be got at to be cleaned or prepared, while, at the same time, they are under lock and key, and safe from molestation. In order to attain the end sought a series of plates alternately fixed and rotary are arranged in a vertical series; and these being amalgamated, the pulp is caused to traverse them seriatim under the action of the centrifugal force and gravity. The plates are enclosed in a casing with hinged sections, so that it may be opened to give access to the plates, or closed and locked when desired. The fixed plates are attached to this casing, and are made in parts; so that when the sections of the casing are turned on their hinges the plates are divided, and appear like shelves. The whole interior of the apparatus may in this way be exposed. The fixed plates are considerably concave on the upper side, and, consequently, when divided access is more readily had to their surface for the removal of deposited material.

There is a series of amalgamated plates arranged on a shaft supported on bearings and revolved by suitable gears, steam-power being conveyed through the bevel gears from a belt running on pulleys. A cylindrical casing encloses the plates and shaft. It is made of sheet or wrought iron, for example, and is composed of four movable sections, hinged to upright rods extending from the bottom to the top plate of the apparatus. On the interior of each section is a series of amalgamating shelf plates in the form of sectors, so that when the casing is closed they form fixed concave plates, which alternate with the amalgamated plates already mentioned. In the centre of these plates there is an opening somewhat larger than the exterior of the shaft, so as to leave a space between for the passage of the pulp. The casing may be locked up by means of an ordinary padlock. After the plates are amalgamated the case is closed, the pulp is admitted above, and the shaft is rotated. The pulp falls in the conical part of the first plate and expands over its surface. Under the influence of centrifugal force it runs over the edge and falls upon a fixed plate below it. This plate being concave its own weight carries the pulp to the centre and through the opening on the next rotary plate. From thence it passes to the next fixed plate, and so on, the tailings passing off below. The number and dimensions of the plates and the velocity of rotations should vary with the nature of the gangue. When desired the casing is opened and plates cleaned by a rubber, the amalgam being thus removed.



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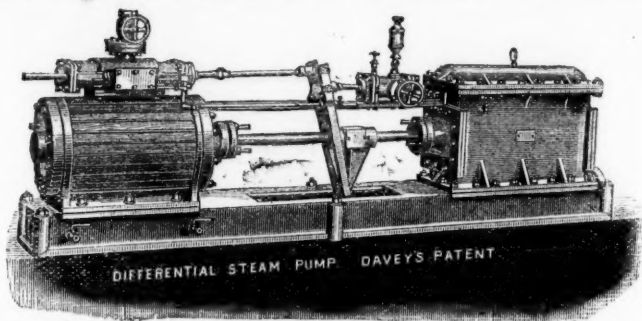
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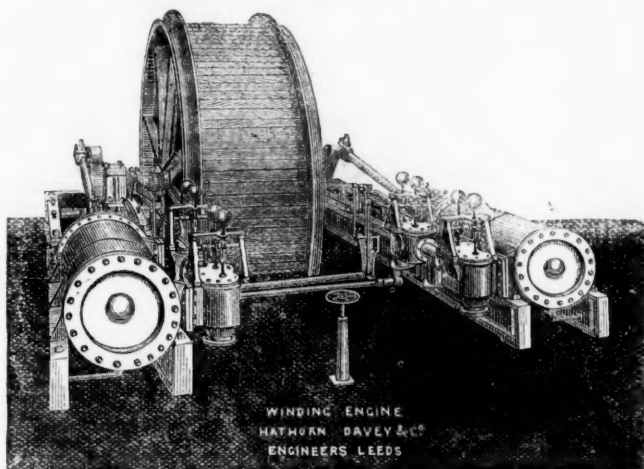
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AND

HYDRAULIC  
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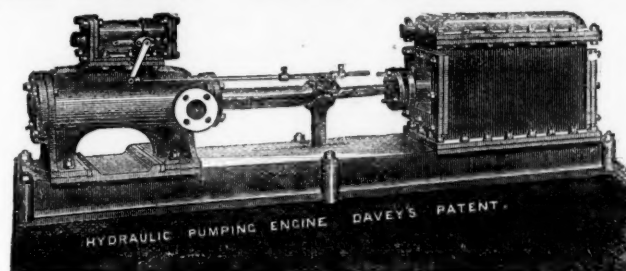
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SORS,  
MAN ENGINES,  
CAPSTANS,  
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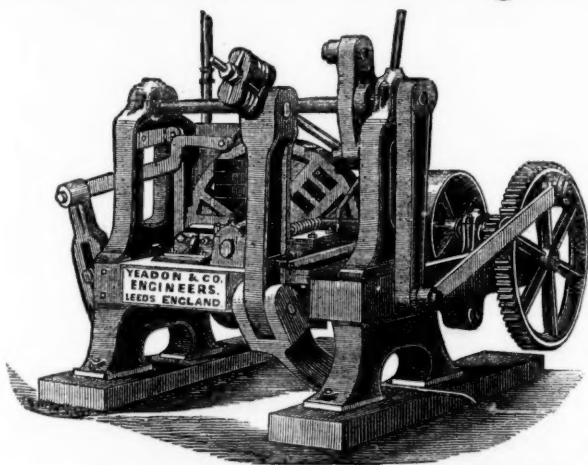
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I continue to be perfectly satisfied with the work performed by the two patent Briquette Machines as well as with that of the Steam Engine, Mixer, &c., which you supplied a few months ago for the manufacture of compressed slack Briquettes, and that I can recommend them as being the best machines I know of, after having carefully studied all the Briquette Machines con- G. FAGES, General Manager.

SOCIETE DES CHARBONNAGES REUNIS DU RIEU DU CŒUR ET DE LA BOULE. QUAREGNON (BELGIUM), SEPTEMBER 13TH, 1879.  
Messrs. Yeadon and Co., Leeds. A. FRANEAU, Managing Director.  
We are entirely satisfied with the erection and working of the two Briquette Machines, as well as the Steam Engine and Mixing Apparatus.

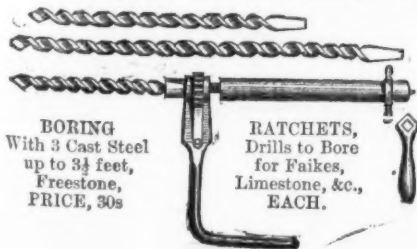
Messrs. Yeadon and Co., Leeds. CHARBONNAGE DE BERNISSART, PRES PERUWELZ, JANUARY 24TH, 1879.  
I continue to be highly satisfied with the Briquette Machines which you supplied in 1877. They do their work very well, and produce the Briquettes very regularly, and of a good quality. G. FAGES, General Manager.

Messrs. Yeadon and Co. SOCIETE HOULLERE DE VENDIN-LEX-BETHUNE, PAS-DE-CALAIS, DECEMBER 2ND, 1880.  
I have the honour to inform you that the Briquette Machines work very well. The Briquettes are very well made. I am highly satisfied with your workmen, who have done their work very well. SYLVA CATTIER, General Manager.

The undersigned, Civil Engineer of Mines, Chevalier of the Legion of Honor, Consulting Engineer for the Mines de Vendin-lex-Bethune, Pas-de-Calais, certifies that the Briquette Machinery for making Briquettes of Coal, supplied by Messrs. Yeadon and Co., to the above Company is working to their entire satisfaction. E. LISBET.  
Lille, December 28, 1880.

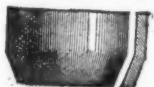
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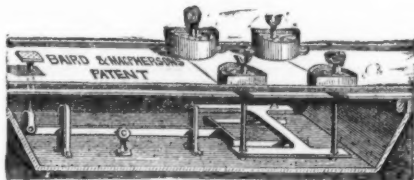


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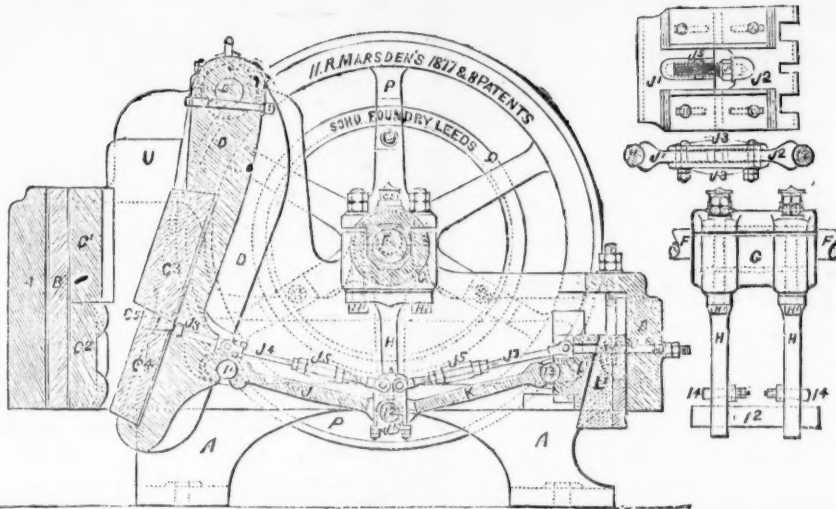
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CATALOGUES, TESTIMONIALS, &c.

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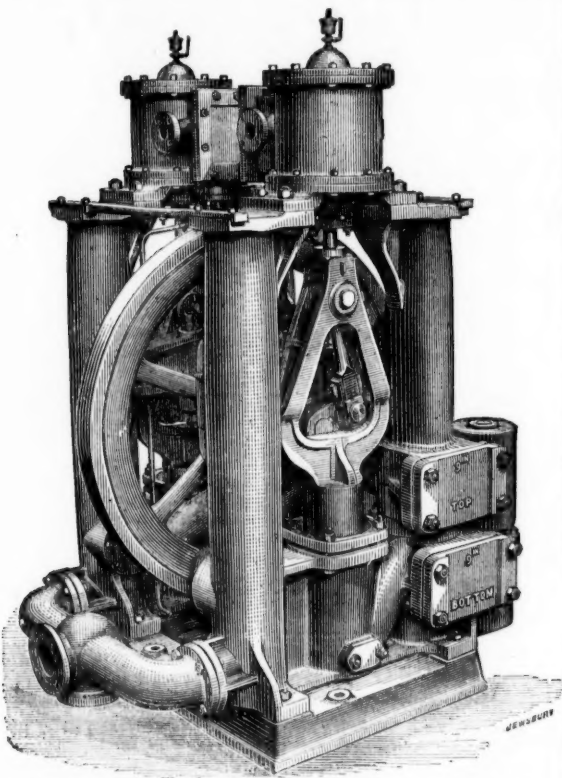


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